SERVICE MANUAL

The Century CC© Bed

From Hill-Rom®

Product No. P892, P894, P895, P896

For Parts Or Technical Assistance **man019rc**
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Century CC Bed Service Manual

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Chapter 1 Introduction

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NOTES:

Purpose of this Manual

This manual provides the required information for normal maintenance and operation of the Hill-Rom Century CC Bed. It also includes, a complete parts list for ordering replacement components. The parts list is located in chapter 5. This manual contains information for several models of the Century CC Bed. Therefore, some information contained in this manual will not apply to your particular bed model.

Who Should Use This Manual

This service manual is intended for use by facility authorized maintenance personnel only. Use by other than authorized maintenance personnel can result in damage to the equipment or injury of personnel.

Organization of this Manual

This service manual contains seven chapters.

Chapter 1: Introduction

You are currently reading chapter 1. Chapter 1 introduces this service manual and the Century CC Bed. The major topics in this chapter are:

- Purpose of this manual
- Who should use this manual
- Organization of this manual
- Typographical conventions used in this manual
- Century CC Bed Introduction, Features, and Specifications
- Bed Configurations
- Safety tips
- Warning and Caution Labels

Chapter 2: Troubleshooting Procedures

Chapter 2 guides the technician through troubleshooting procedures to isolate service needs. The major topics in this chapter are:

- Introduction to troubleshooting
- Initial actions
- Operational tests
- Component location and identification
- Repair analysis procedures

Chapter 3: Theory of Operation

Chapter 3 provides the detailed technical information required to understand how the Century CC Bed functions. The major topics in this chapter are:

- Introduction
- Schematics and diagrams
- Principles of operation

Chapter 4: Removal, Replacement, and Adjustment Procedures

Chapter 4 provides instructions for the removal, replacement, and adjustment of components. The major topics in this chapter are:

- Mechanical system components
- Electrical system components
- Pneumatic system components
- Hydraulic system components

Chapter 5: Parts List

Chapter 5 contains the information required to order Hill-Rom replacement parts, including an illustrated parts list. The major topics in this chapter are:

- Warranty
- Exchange policy
- Ordering service parts
- Recommended spare parts

Chapter 6: General Procedures

Chapter 6 provides common maintenance procedures. Major topics in this chapter are:

- Cleaning and care
- Preventive maintenance

Chapter 7: Accessories

Chapter 7 describes accessories currently available for the Century CC Bed.

Typographical Conventions Used in this Manual

This manual contains different typographical conventions designed to enhance readability and understanding of its content. Note the following examples:

- Standard text—used for standard text throughout the manual.
- **Boldface text**—used to emphasize a word or phrase.
- **NOTE:**—used to set apart text providing special information or clarification.
- The symbol shown below highlights a WARNING or CAUTION

Figure 1-1. Warning and Caution Symbol

  - A WARNING identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
  - A CAUTION points out special procedures or precautions that service personnel must follow to avoid equipment damage.

Introduction, Features, and Specifications

The Century CC Bed has been manufactured in a variety of models. Some of the information contained in this manual may not apply to your bed.

A Century CC Bed contains a combination of pneumatic, hydraulic, electrical, and mechanical systems to support both standard and optional bed features.

The bed can be operated through either electric or manual controls. This is a useful feature when performing maintenance.

Before Operating

WARNING:
Powered bed mechanisms can cause serious injury. Operate the bed only when persons are clear of the mechanisms.

Before you operate the bed, be sure to read and understand in detail the contents of this manual. It is important that you read and strictly follow all safety guidelines in this manual.

Features and Specifications

Dual Control System

The electric and manual bed controls can be used independently or concurrently and ensure that the bed will be functional at all times.

Manual Controls

Manual controls allow bed operation during transport or whenever an electric power source is not available. The head, knee, and hilow functions are easily operated through a mode selector lever and the Up/Down foot pedals. These features are conveniently located on both sides of the bed, and their functions are clearly identified.

Electric Controls

The low voltage switches that operate the electric controls are accessible to both the attendant and patient in the siderail. Switches are also available for the attendant only in the nurse control panel.

Radiolucent Surface

The cantilever design of the bed's lift mechanism and the special radiolucent material of the seat and head pans allow C-arm interface for lower abdominal to upper chest fluoroscopic procedures. The 21" x 38" (534 x 965 mm) unobstructed window [20" x 37" (508 x 939 mm) with optional in-bed scale] allows scanning of the patient's torso. In-bed, x-ray procedures are also possible with the optional x-ray cassette holder.

F.D.A. Conformance

The bed conforms to F.D.A. performance standards for diagnostic x-ray systems and their major components in compliance with 21 CFR 1020.

Instant CPR

Instant CPR facilitates CPR procedures. When the selector lever on either side of the bed is rotated to the full extent of its travel in either direction and held there, the sleep surface will flatten in approximately seven seconds. The head and knee sections flatten simultaneously.

Available Patient Controls

The Century CC Bed facilitates patient operation of several standard and optional comfort and convenience features through use of low voltage finger touch switches. These switches are a momentary contact type and are pictorially labeled to indicate their function. They are conveniently located in a fixed position in the head section siderails of the bed. Because the head section siderails move with the head section of the bed, the switches remain in a constant position relative to the patient. This ensures that the patient will have easy access to the switches at any bed position. Patient attendants can also activate these controls from outside the bed perimeter. To avoid electric motor damage, the low voltage switches are electronically interlocked to prevent contradictory direction signaling to the motor.

Head Section Inclination

This switch is located on the inside surface of each head section siderail. The patient can elevate the head section of the bed to a maximum inclined position of 57°, or lower the head section to a completely flat position. The automatic-contour mode will raise the knee section simultaneously with the head section to prevent the patient from slipping toward the foot end of the bed (see “Automatic-Contour” on page 1-10).

Knee Section Inclination

The knee section of the bed can be elevated by the patient to a maximum inclined position of 30° or lowered to a completely flat position. This switch is located on the inside surface of each head section siderail.

High Low Sleeping Surface (Hilow)

The patient attendant can raise or lower the height of the bed sleeping surface to facilitate examination or bed ingress/egress. This switch is located on the outside surface of each head section siderail.

Nurse Call

A nurse call switch is located on both the inside and outside surface of both head section siderails. This provides an immediate capability for the patient or anyone near the bed to summon help.

Lighting (Optional)

Headwall lighting can be controlled by the patient or patient attendant through use of the switches located on the inside surface of the head section siderail.

Entertainment (Optional)

The entertainment control package includes switches for television, music, and volume. These are located on the inside surface of each head section siderail.

Automatic-Contour

As the head section is raised, the knee section automatically elevates to 14°. This helps to prevent the patient from sliding toward the foot end of the bed thus minimizing the need to reposition the patient. Automatic contour is an electrical function and cannot be operated by the manual controls. The patient can use the automatic contour function to flatten the sleep surface to allow easy access to the bed.

Head Elevation Gauge

The head elevation gauge indicates the incline of the head section to a maximum of 57°. A gauge is located on each side of the bed below the middle of the sleep surface.

Foot Section Inclination

The foot section can be independently elevated by manually raising and engaging the support arm. Repositioning does not affect other bed features or operation. However, the foot section will not automatically flatten when the Instant CPR mode is selected with the mode selector lever.

Nurse Control Panel

A nurse control panel is located at the foot end of the bed. This control panel contains the switches and the Trendelenburg indicator(s) used by the patient's attendant. Indicator lights are located on the vertical surface of the control panel below the bumper rail, and are therefore visible at all times. While providing easy access for the patient attendant, these controls have been located to prevent the bed occupant from accidentally activating them.

The nurse control panel contains:

- Hilow function lockout switch
- Knee function lockout switch
- Head function lockout switch
- Contour function lockout switch (not offered on some European beds)
- Hilow control switch
- Bed scale control system (optional)
- Trendelenburg angle indicator
- Trendelenburg angle limit indicator (on some models)

Controls located on the vertical face of the nurse control panel below the bumper rail:

- Bed exit indicator—amber (optional)
- Patient lockouts indicator—red or amber
- Air system controls (optional)
  - Mattress pressure adjustment switch
  - Prevention on/off selector switch
  - Air system power switch
  - Excessive air loss indicator—amber

Lockouts

Lockouts are provided in the nurse control panel to disable certain siderail controls. These prevent patient operation of the head, knee, hilow, and contour features of the bed from the siderail controls. However, if the knee lockout is activated without activating the contour lockout, the knee section will move when the head function switch is actuated.

Trendelenburg/Reverse Trendelenburg

Trendelenburg positioning is achieved by simultaneously gripping the red/orange handles located along each side of the nurse control panel at the foot end of the bed. This releases the sleep surface frame from a locked position and allows for easy Trendelendurg positioning. A Trendelenburg angle indicator, located on the nurse control panel, indicates the angle of Trendelenburg/Reverse Trendelenburg in degrees. Maximum Trendelenburg angle is 12°. Simply releasing the red/orange handles will lock the sleep surface frame in position.

Some models of the Century CC Bed have a Trendelenburg angle limit indicator located on the nurse control panel. This indicator shows the maximum Trendelenburg angle possible at the current sleep surface height. To achieve the maximum Trendelenburg angle of 12°, the sleep surface cannot be in its minimum height position.

Mobility/Braking and Steer Lock

The bed is mounted on four double ball bearing swivel type casters. Each caster has molded non-marking wheels. They measure 8" (203 mm) in diameter with a minimum tread width of 1 1/2" (39 mm) and a minimum stem diameter of 1" (26 mm). Optional 6" (152 mm) casters are also available. The casters are mated with ball bearing axles for high mobility and are easily removed for cleaning or replacement. Casters for some European bed models have an anti-static feature.

The caster braking system is engaged by depressing a red/orange foot pedal located on either end of the bed. This single foot operation simultaneously locks all four casters, preventing rolling or swiveling.

Similarly, the steer system is engaged by depressing the green foot pedal located on either end of the bed. This single foot operation locks one caster, at the left foot position, in a non-swiveling position. The three remaining casters are free to swivel, allowing easy steering of the bed.

Foot pedals for operation of the braking and steering systems are conveniently located and clearly identify their function. When the pedal bar is placed in the neutral (horizontal) position, all four casters are free to roll and swivel.

Convertible Foot Panel

WARNING:
Do not put more than 45 lbs (20 kgs) of equipment on the foot panel in the tray position. Overloading the foot panel could bend the foot panel frame and/or cause the equipment to fall onto the patient.

The standard foot panel can be raised to a horizontal position over the foot section of the bed. In this position, the foot panel serves as an equipment support surface holding up to 45 lbs (20 kgs) of life support equipment during patient transfer. It also can serve as a temporary work surface for general nursing activities during non-transfer situations.

Head/Foot Panels

The head and foot panels have handles molded in them to assist with steering and maneuvering. The head panel is removable and can be placed under the patient during CPR procedures or used for bed length extension.

Bed Extender

The standard bed extender accommodates taller patients. Fifteen inches can be added to the overall length of the bed by lifting and rotating the mattress stops toward the foot end of the bed, and attaching the head panel to the stops. Optional extender mattress pads are available.

Permanent IV Rod

A standard IV rod is permanently attached to the head end of the bed on the left side. When not in use, the IV rod can be easily stored in a horizontal position between the head panel and the sleep surface. An improperly stored IV rod can cause errors when measuring patient weight with optional scales.

IV Rod Accommodation

In addition to the permanently attached IV rod, there are four other locations to install an IV rod on the bed—two at the head end corners and two at the foot end corners. These IV rod support features will also accommodate fracture frame equipment without degrading bed functions or the bed's structural integrity.

Infusion Support System Accommodation

Four locations are provided on the bed to accommodate the installation of Hill-Rom's optional Infusion Support System—two at the head end corners and two at the foot end corners.

Docking/Wall Protection

Standard spring loaded roller bumpers, located at the head end of the bed, protect walls and headwall systems from damage. Optional cane bumpers are available for bed compatibility with modular headwall systems.

Siderails

The bed is equipped with pairs of head and foot siderails as standard equipment. They can be set in up, intermediate, and down positions. In the down position, the rails store under the frame of the bed providing a *zero transfer gap*. This facilitates safe surface-to-surface transfer of patients. This design not only can optimize access to the patient but reduces the overall width of the bed. Utilizing a parallelogram shape, the gap between head and foot siderails is minimized.

Head Siderails

Each head siderail contains controls for head, knee, and hilow functions.

Patient Exit Alert (Optional)

The bed is designed to send a warning signal through the nurse call system if a patient exits the bed. This function can be selected by activating the bed exit on/off switch located on the bed scale controls of the nurse control panel.

Excessive Air Loss Alert (Optional)

If the compressor runs excessively, the bed will illuminate a warning light on the air system controls. These controls are located on the nurse control panel below the bumper rail. This feature notifies the staff that the air system should receive prompt maintenance attention.

Restraint Strap Holders

Eight built-in restraint strap holders are provided. One is located on each side of the head, thigh, and foot sections of the bed. These six strap holders retract when not in use. Two non-retracting holders are located at the foot end of the bed.

Drainage

Four built-in drainage hooks are provided with two located on each side of the seat section. Additionally, two built-in drainage racks are provided on each side of the foot section.

Dust Covers

All bed mechanisms are enclosed to protect them from damage, to improve sepsis control, and to facilitate housekeeping effectiveness.

SideCom Communication System (Optional)

SideCom allows integration of nurse call, entertainment (TV and radio), and lighting in the half length siderails.

Patient Phone (Optional)

An optional telephone system can be mounted to the half length siderails (on either side of the bed) or on a chair positioned next to the bed.

Integrated Air Support System (Optional)

An optional, patented, integrated air support system is available on Century CC Bed models 895 and 896. The system is integral with the bed and allows adjustments of sleep surface firmness in the comfort mode. In the prevention mode, the surface becomes a dynamic pressure relief tool. Both modes eliminate the need for surface overlays commonly used for comfort and pressure relief. This system may be retrofitted onto the 892 and 894 model beds. Controls for the air system are located at the nurse control panel below the bumper rail at the foot end of the bed.

Dual Bladder Air System

The DynamicAire Sleep Surface (mattress) has a dual bladder core encompassed with foam. The air pressure in the upper bladder can be adjusted by the patient attendant. Air pressure in the bottom bladder is electronically monitored and maintained to ensure that a patient will never bottom out regardless of bed position. The foam surrounding the air bladders helps reduce shear forces on the patient's skin and protects the air bladders from damage.

Comfort Mode

The comfort mode allows the patient attendant to tailor the sleep surface firmness/softness to the patient's preference. The firmness/softness of the sleep

surface is controlled by increasing or decreasing the amount of air contained in the upper bladder. To go from minimum to maximum air pressure takes approximately 30 seconds. When adjustment limits are reached, the compressor shuts down.

Prevention Mode

When a patient is at risk of skin breakdown and an overlay would normally be used (to be determined by hospital skin care specialists), the prevention mode can be activated. The system will electronically monitor the air pressure in the upper bladder and automatically adjusts the air level to minimize pressure points. This reduces the risk of skin breakdown. When the prevention mode switch is in the ON position, comfort mode controls are locked out.

Surface

The mattress reduces the risk of skin breakdown by dissipating the heat from between the sleep surface and the patient. The cover has a zipper on three sides to allow easy access to all internal sleep surface components. Four air quick-disconnect couplings make removal of the sleep surface easy. Six magnets are attached to the bottom of the cover to help hold bed sheets in place.

Built-In Safety Features

Every 8 minutes, the air support system electronically monitors itself to ensure system integrity. The compressor run time is monitored. If the compressor runs too long, it will be automatically shut down. Pressure relief valves have been built into the system that automatically open at a set level. In addition, the air bladders are designed to hold more pressure than the air compressor can produce.

Air Supply System (Optional)

The air supply system is a self contained unit with the following specifications:

- 1.0 amp maximum
- Permanently lubricated
- Totally enclosed
- 115 volts ACAC, 60 hertz
- Single phase

Comfortline CC Mattress

The Comfortline CC Mattress is a pressure reducing mattress designed for patient comfort and to reduce interface pressure. This mattress is standard on Century CC Bed models 892 and 894.

Weight Scale System (Optional)

Bed models 894 and 896 are equipped with a system for measuring and tracking the patient's weight in bed. This eliminates the need for cumbersome lift systems and avoids causing patient discomfort. The system has a built-in patient egress alarm designed to notify the nurse when the patient has left the bed. The bed is equipped with a rechargeable six volt battery to keep the scale fully operational should the bed be disconnected from its electric power source.

Scale operating instructions are located on the bed foot panel. The scale operating controls are located at the foot end of the bed in the attendant control console. These controls include the following:

Scale Controls (early version)

- OFF/MODE switch
- Four digit LBS/KGS display
- UNITS switch
- READ switch
- ZERO switch
- Entry pads (four)
- SET switch
- ALARM switch

Scale Controls (current version)

- Four digit LBS/KGS Display
- ZERO switch
- LBS/KGS switch
- ADJUST WEIGHT "+" switch
- ADJUST WEIGHT "–" switch
- CHANGE ITEMS switch
- WEIGH switch
- BED EXIT ON/OFF switch

Scale Specifications

- Maximum Capacity—500 lbs (226 kg)
- Accuracy—Within 1% (up to 400 lbs)
- Repeatability—Within 0.1 lb or 0.1 kg

Electric System Data

All beds are factory tested for complete operation with and without load. Each bed is tested for insulation integrity and micro leakage currents. All beds must indicate less than 50 micro amperage leakage current ungrounded, before shipment.

The supply cord is #18 AWG low leakage 3 conductor type STO. It extends 72" (1829 mm) from the head end of the bed. The supply cord and attachment plug cap are UL and CSA listed hospital grade.

UL Classification

All bed electrical components have been UL and CSA approved for this application.

Hydraulic System

The hydraulic system is a closed system that does not need fluid refill as part of preventive maintenance. The hydraulic pump is rated at 0.50 gpm (0.03 liter/sec) at 650 psi (4481 kPa).

Motor

The motor drives the hydraulic pump and has the following specifications:

- 5.0 amps maximum
- Permanently lubricated
- 115 volts AC, 60 hertz
- Single phase
- Automatic thermal reset
- Mechanically insulated from all metal parts

Motor Power Switch

A motor power lockout switch is located at the foot end of the bed on the base frame. This location was selected to minimize accidental activation. When this switch is in the OFF position, all electric bed positioning functions are disabled. Manual controls will still operate.

Printed Circuit Boards

CMOS boards are used throughout. All P.C. board functions are tested at the completion of circuit board assembly and once again in the completely assembled bed. A line transient filter has been included to protect the boards from excessive line surges.

Specification

Table 1-1 on page 1-19 contains the specifications of the Century CC Bed.

Table 1-1. Specifications

Description	Specification
Height—from floor to top of support surface (6" casters, high bed position)	39.3" (998 mm)
Height—from floor to top of support surface (6" casters, low bed position)	21.3" (541 mm)
Height—from floor to top of support surface (8" casters, high bed position)	40.0" (1016 mm)
Height—from floor to top of support surface (8" casters, low bed position)	22.5" (571 mm)
Overall length (without roller bumpers)	90" (2286 mm)
Overall length (with roller bumpers)	94" (2388 mm)

Description	Specification
Overall width (siderails in stored position)	34" (864 mm)
Overall width (siderails in up position)	38.5" (978 mm)
Hilow range of travel	17.5" (444 mm)
Sleep surface width and length	34" x 80" (864mm x 2032 mm)
Head elevation—maximum	57°
Knee elevation—maximum	32°
Trendelenburg—maximum	12°
Reverse Trendelenburg—maximum	12°
Patient weight—maximum (standard applications) Safe working load—maximum (European applications)	500 lbs (180 kg)
Casters	8" diameter x 1.5" wide (203 mm diameter x 38 mm wide)
Casters (optional)	6" diameter x 1.5" wide (152 mm diameter x 38 mm wide)

Model Identification

Hill-Rom currently manufactures different models of the Century CC Bed. It is helpful to know the differences between these models (see table 1-2 on page 1-21). All of the Century CC Bed models have radiolucent head and seat sections.

The Century CC Bed is offered with various siderail option packages. A siderail option number can be found in the product number along with the model number,. An example of a product number would be P894GJ53. In the example, 894GJ is the model number and 53 is the siderail option number. In this example, the 53 siderail option includes: bed functions, nurse call, entertainment, and lighting (see table 1-3).

Chapter 5 provides the applicable part number information to support the various bed models, and chapter 7 contains information on upgrade kits and accessories.

Table 1-2. Model Identification

Model	Description
892	Bed without scale and air system
894	Bed with scale only
895	Bed with air system only
896	Bed with scale and air system

Table 1-3. Siderail Option ID

Siderail Option	Module Number	Description
50	380	Bed functions
51	381	Bed functions, and nurse call
52	382	Bed functions, nurse call, and entertainment
53	383	Bed functions, nurse call, entertainment, and lighting
59	389	Bed functions—upgradable to nurse call, entertainment, and lighting
60	380	Bed functions, and isolation transformer
63	383	Bed functions, nurse call, entertainment, lighting, and isolation transformer

Safety Tips

We urge you to incorporate these safety tips into your procedures for the safety of your patients and staff.

WARNING:
One of the risks associated with the use of electrical equipment includes the potential for electrical shock. Establish policies and procedures to train and educate your staff on the inherent risks associated with electrical equipment.

WARNING:
Unplug the unit from its power source before cleaning or servicing.

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

WARNING:
If it is necessary to work under the sleep surface or work with the bed in the high position, you must use the hilow cylinder block and set the brakes.

Bed Position

To reduce the risk of severe falls by patients, always leave the bed in the low position when the patient is unattended.

Siderails

Leave the siderails fully up and locked when the patient is left unattended. When raising the siderails, be sure that you hear the click that signals the up and locked condition. Give the siderails a tug to verify that they are locked in position.

Siderails are not intended to be used as a restraint device. The appropriate medical personnel should determine the level of restraint necessary to ensure a patient will remain safely in bed.

Brake and Steer

WARNING:
Set the brakes, and leave the unit in the low position. A patient might use the unit for support when getting on or off of the sleep surface. Injuries to the patient could occur if the brakes are not set.

Always keep the casters locked in the brake position. Patients often use the bed for support when getting in or out of bed, and serious injuries can result if the bed moves. After the brakes are set, rock the bed gently to ensure that the casters are locked. Use the steer mode when moving the bed. This will make the bed easier to control.

Fluids

When massive spills occur in the area of the circuit board and motors, immediately:

WARNING:
Unplug the unit from its power source before proceeding. An electrical shock hazard exists.

1. Unplug the unit from its power source.
2. Take care of the patient.
3. Clean the fluid from the bed.
4. Have maintenance inspect the bed completely. Fluids can damage the electrical controls leaving them inoperable or cause the bed to operate erratically. The bed could even operate without warning, resulting in severe injuries.
5. Do not put the bed back into service until it is thoroughly dry, tested, and determined safe to operate.

Water Mattress

The significant weight of a water mattress places an unnecessary stress on the hydraulic system. In most cases, the patient's weight plus the weight of the water mattress exceeds the recommended weight capacity of the bed. A greater concern is the fact that water mattresses are subject to rupture. This could allow large amounts of water to contact the electrical components of the bed. We believe the potential serious results of a mattress rupture are problems a healthcare provider would want to avoid.

Lockout Controls

To restrict a patient or visitor from operating the bed through the siderail controls, activate the appropriate lockout control in the nurse control panel at the foot end of the bed. The lockout controls are for the convenience of the staff and the safety of the patient. Use them when appropriate.

Instant CPR

The emergency head and knee release, Instant CPR, is to be used by healthcare professionals only. The selector lever should be moved to the Instant CPR position and held there until the bed is completely flat to ensure no delay.

Convertible Foot Panel

WARNING:
Do not put more than 45 lbs (20 kgs) of equipment on the foot panel in the tray position. Overloading the foot panel could bend the foot panel frame and/or cause the equipment to fall onto the patient.

Before placing any equipment on the foot panel in the transport shelf position, tug on the foot panel to ensure that it is locked in position. Equipment placed on the foot panel should be secured with the provided straps. The weight limit on the foot panel is 45 lbs (20 kgs).

Always return the convertible foot panel to its original position after use. Ensure that the foot panel is locked in the down position.

Foot Extender

When the foot panel is in the extended bed position, the ball lock pins must be installed through the frame rails to lock the foot panel in position.

Warning and Caution Labels

Warning and caution labels have been placed on the bed and should be heeded to reduce the risk of personal injury or damage to the bed (see figure 1-2).

Figure 1-2. Warning and Caution Labels (English)

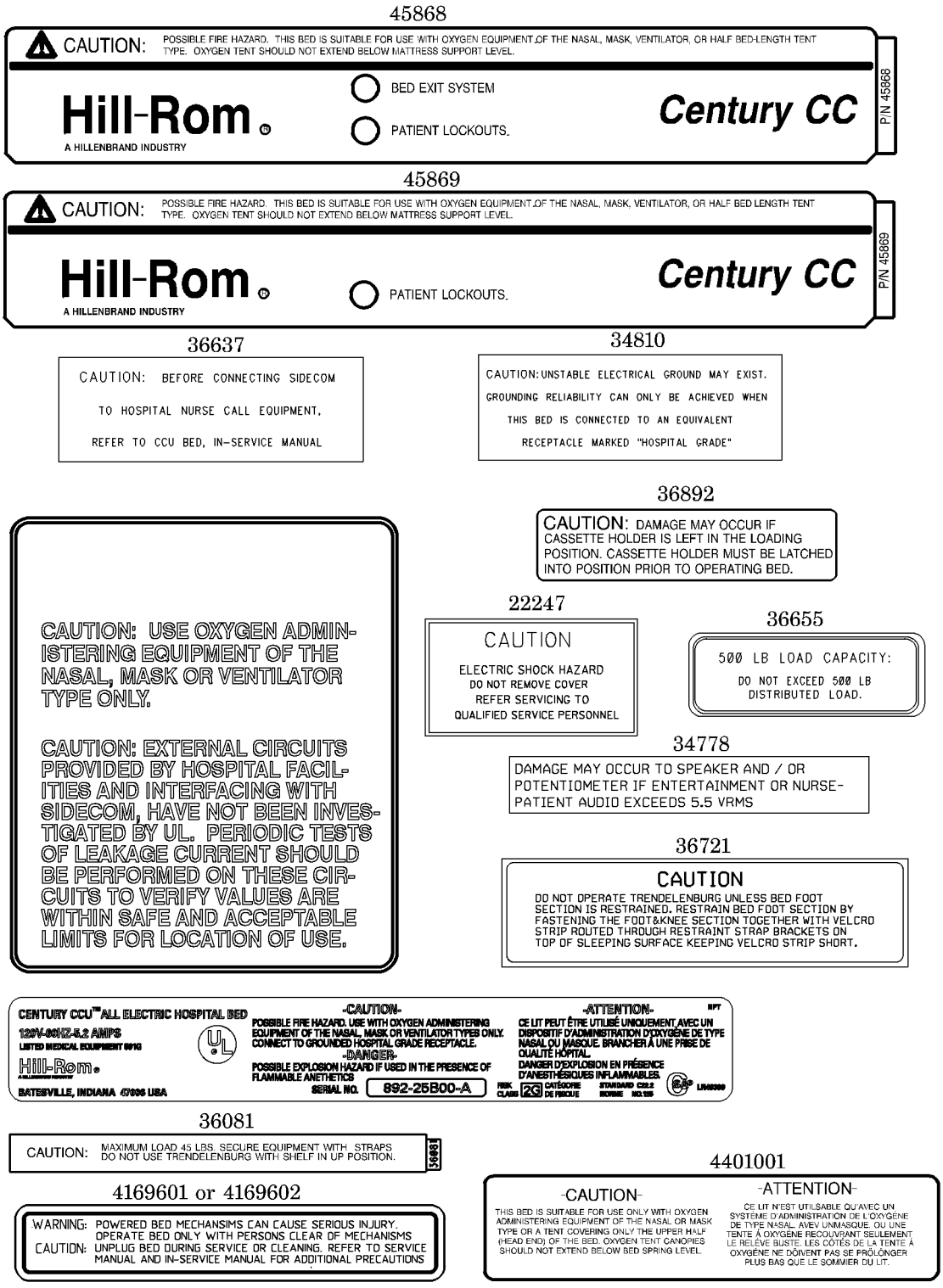
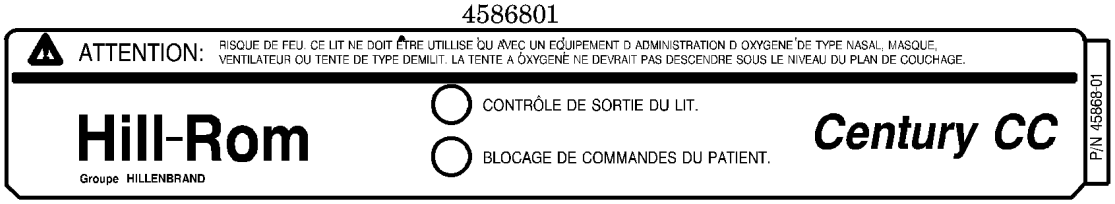
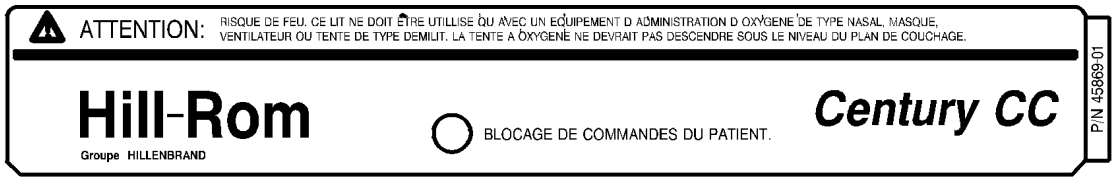

45868
CAUTION: POSSIBLE FIRE HAZARD. THIS BED IS SUITABLE FOR USE WITH OXYGEN EQUIPMENT OF THE NASAL, MASK, VENTILATOR, OR HALF BED-LENGTH TENT TYPE. OXYGEN TENT SHOULD NOT EXTEND BELOW MATTRESS SUPPORT LEVEL.
Hill-Rom
A HILLENBRAND INDUSTRY
BED EXIT SYSTEM
PATIENT LOCKOUTS.
Century CC
P/N 45868
45869
CAUTION: POSSIBLE FIRE HAZARD. THIS BED IS SUITABLE FOR USE WITH OXYGEN EQUIPMENT OF THE NASAL, MASK, VENTILATOR, OR HALF BED LENGTH TENT TYPE. OXYGEN TENT SHOULD NOT EXTEND BELOW MATTRESS SUPPORT LEVEL.
Hill-Rom
A HILLENBRAND INDUSTRY
PATIENT LOCKOUTS.
Century CC
P/N 45869
36637
CAUTION: BEFORE CONNECTING SIDECOM TO HOSPITAL NURSE CALL EQUIPMENT, REFER TO CCU BED, IN-SERVICE MANUAL
34810
CAUTION: UNSTABLE ELECTRICAL GROUND MAY EXIST. GROUNDING RELIABILITY CAN ONLY BE ACHIEVED WHEN THIS BED IS CONNECTED TO AN EQUIVALENT RECEPTACLE MARKED "HOSPITAL GRADE"
36892
CAUTION: DAMAGE MAY OCCUR IF CASSETTE HOLDER IS LEFT IN THE LOADING POSITION. CASSETTE HOLDER MUST BE LATCHED INTO POSITION PRIOR TO OPERATING BED.
CAUTION: USE OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL, MASK OR VENTILATOR TYPE ONLY.
CAUTION: EXTERNAL CIRCUITS PROVIDED BY HOSPITAL FACILITIES AND INTERFACING WITH SIDECOM, HAVE NOT BEEN INVESTIGATED BY UL. PERIODIC TESTS OF LEAKAGE CURRENT SHOULD BE PERFORMED ON THESE CIRCUITS TO VERIFY VALUES ARE WITHIN SAFE AND ACCEPTABLE LIMITS FOR LOCATION OF USE.
22247
CAUTION
ELECTRIC SHOCK HAZARD
DO NOT REMOVE COVER
REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL
36655
500 LB LOAD CAPACITY:
DO NOT EXCEED 500 LB DISTRIBUTED LOAD.
34778
DAMAGE MAY OCCUR TO SPEAKER AND / OR POTENTIOMETER IF ENTERTAINMENT OR NURSE-PATIENT AUDIO EXCEEDS 5.5 VRMS
36721
CAUTION
DO NOT OPERATE TRENDELENBURG UNLESS BED FOOT SECTION IS RESTRAINED. RESTRAIN BED FOOT SECTION BY FASTENING THE FOOT&KNEE SECTION TOGETHER WITH VELCRO STRIP ROUTED THROUGH RESTRAINT STRAP BRACKETS ON TOP OF SLEEPING SURFACE KEEPING VELCRO STRIP SHORT.
CENTURY CCU™ ALL ELECTRIC HOSPITAL BED
120V~60HZ-5.2 AMPS
LISTED MEDICAL EQUIPMENT 6N16
Hill-Rom
BATESVILLE, INDIANA 47006 USA
-CAUTION-
POSSIBLE FIRE HAZARD. USE WITH OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL, MASK OR VENTILATOR TYPES ONLY. CONNECT TO GROUNDED HOSPITAL GRADE RECEPTACLE.
-DANGER-
POSSIBLE EXPLOSION HAZARD IF USED IN THE PRESENCE OF FLAMMABLE ANETHETICS
SERIAL NO. 892-25B00-A
-ATTENTION-
CE LIT PEUT ÊTRE UTILISÉ UNIQUEMENT AVEC UN DISPOSITIF D'ADMINISTRATION D'OXYGÈNE DE TYPE NASAL OU MASQUE. BRANCHER À UNE PRISE DE QUALITÉ HÔPITAL.
DANGER D'EXPLOSION EN PRÉSENCE D'ANESTHÉSIQUES INFLAMMABLES.
RISK CLASS 2G
36081
CAUTION: MAXIMUM LOAD 45 LBS. SECURE EQUIPMENT WITH STRAPS DO NOT USE TRENDELENBURG WITH SHELF IN UP POSITION.
54681
4401001
-CAUTION-
THIS BED IS SUITABLE FOR USE ONLY WITH OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL OR MASK TYPE OR A TENT COVERING ONLY THE UPPER HALF (HEAD END) OF THE BED. OXYGEN TENT CANOPIES SHOULD NOT EXTEND BELOW BED SPRING LEVEL.
-ATTENTION-
CE LIT N'EST UTILISABLE QU'AVEC UN SYSTÈME D'ADMINISTRATION DE L'OXYGÈNE DE TYPE NASAL AVEV UNMASQUE, OU UNE TENTE À OXYGÈNE RECOUVRANT SEULEMENT LE RELÈVE BUSTE. LES CÔTÉS DE LA TENTE À OXYGÈNE NE DÒIVENT PAS SE PROLÒNGER PLUS BAS QUE LE SOMMIER DU LIT.
4169601 or 4169602
WARNING: POWERED BED MECHANSIMS CAN CAUSE SERIOUS INJURY. OPERATE BED ONLY WITH PERSONS CLEAR OF MECHANISMS
CAUTION: UNPLUG BED DURING SERVICE OR CLEANING. REFER TO SERVICE MANUAL AND IN-SERVICE MANUAL FOR ADDITIONAL PRECAUTIONS

Figure 1-3. Warning and Caution Labels (French)

4586801


ATTENTION: RISQUE DE FEU. CE LIT NE DOIT ÊTRE UTILLISÉ QU AVEC UN ÉQUIPEMENT D ADMINISTRATION D OXYGENE DE TYPE NASAL, MASQUE, VENTILATEUR OU TENTE DE TYPE DEMILIT. LA TENTE A OXYGENE NE DEVRAIT PAS DESCENDRE SOUS LE NIVEAU DU PLAN DE COUCHAGE.
Hill-Rom
Groupe HILLENBRAND
CONTRÔLE DE SORTIE DU LIT.
BLOCAGE DE COMMANDES DU PATIENT.
Century CC
P/N 45868-01

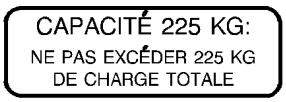
4586901


ATTENTION: RISQUE DE FEU. CE LIT NE DOIT ÊTRE UTILLISÉ QU AVEC UN ÉQUIPEMENT D ADMINISTRATION D OXYGENE DE TYPE NASAL, MASQUE, VENTILATEUR OU TENTE DE TYPE DEMILIT. LA TENTE A OXYGENE NE DEVRAIT PAS DESCENDRE SOUS LE NIVEAU DU PLAN DE COUCHAGE.
Hill-Rom
Groupe HILLENBRAND
BLOCAGE DE COMMANDES DU PATIENT.
Century CC
P/N 45869-01

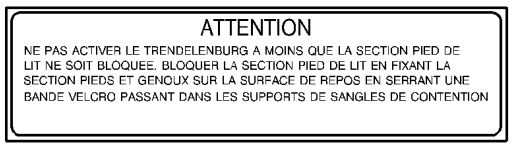
2224701

3481101

3665501



3672101


ATTENTION
NE PAS ACTIVER LE TRENDELENBURG A MOINS QUE LA SECTION PIED DE LIT NE SOIT BLOQUEE. BLOQUER LA SECTION PIED DE LIT EN FIXANT LA SECTION PIEDS ET GENOUX SUR LA SURFACE DE REPOS EN SERRANT UNE BANDE VELCRO PASSANT DANS LES SUPPORTS DE SANGLES DE CONTENTION

3608101

ATTENTION: CHARGE MAXIMUM 20KGS - VEUILLEZ SANGLER L'EQUIPEMENT. NE PAS UTILISER LA DECLIVE/PROCLIVE QUAND LE PENNEAU EST EN POSITION ETAGÈRE

CENTURY CCU™ ALL ELECTRIC HOSPITAL BED
120V-60HZ-5.2 AMPS
LISTED MEDICAL EQUIPMENT 5016
Hill-Rom
BATESVILLE, INDIANA 47006 USA
-CAUTION-
POSSIBLE FIRE HAZARD. USE WITH OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL, MASK OR VENTILATOR TYPES ONLY. CONNECT TO GROUNDED HOSPITAL GRADE RECEPTACLE.
-DANGER-
POSSIBLE EXPLOSION HAZARD IF USED IN THE PRESENCE OF FLAMMABLE ANETHETICS
SERIAL NO. 892-25B00-A
-ATTENTION-
CE LIT PEUT ÊTRE UTILISÉ UNIQUEMENT AVEC UN DISPOSITIF D'ADMINISTRATION D'OXYGÈNE DE TYPE NASAL OU MASQUE. BRANCHER À UNE PRISE DE QUALITÉ HÔPITAL.
DANGER D'EXPLOSION EN PRÉSENCE D'ANESTHÉSIQUES INFLAMMABLES.
RISK CLASS 2G CATÉGORIE DE RISQUE

416960101 or 416960201

4401001

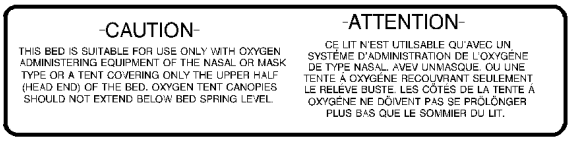
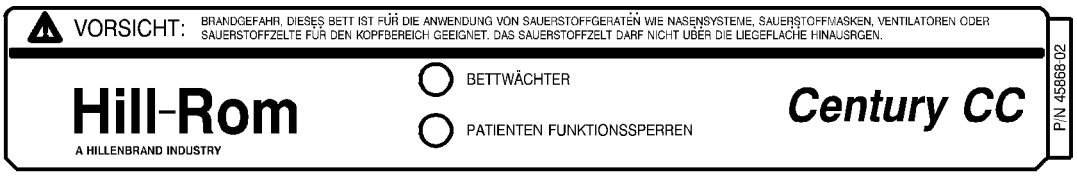
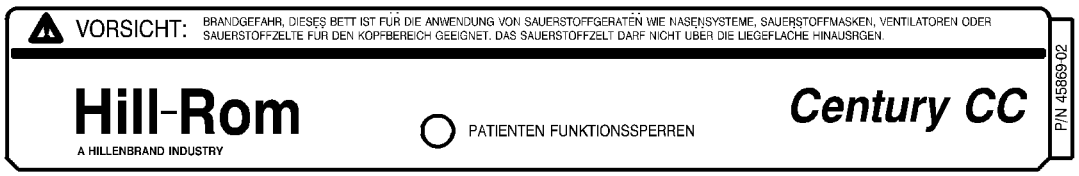

-CAUTION-
THIS BED IS SUITABLE FOR USE ONLY WITH OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL OR MASK TYPE OR A TENT COVERING ONLY THE UPPER HALF (HEAD END) OF THE BED. OXYGEN TENT CANOPIES SHOULD NOT EXTEND BELOW BED SPRING LEVEL.
-ATTENTION-
CE LIT N'EST UTILISABLE QU'AVEC UN SYSTÈME D'ADMINISTRATION DE L'OXYGÈNE DE TYPE NASAL, AVEC UN MASQUE, OU UNE TENTE À OXYGÈNE RECOUVRANT SEULEMENT LE RELÈVE BUSTE. LES CÔTÉS DE LA TENTE À OXYGÈNE NE DOIVENT PAS SE PROLONGER PLUS BAS QUE LE SOMMIER DU LIT.

Figure 1-4. Warning and Caution Labels (German)

4586802


VORSICHT: BRANDGEFAHR, DIESES BETT IST FÜR DIE ANWENDUNG VON SAUERSTOFFGERÄTEN WIE NASENSYSTEME, SAUERSTOFFMASKEN, VENTILATOREN ODER SAUERSTOFFZELTE FÜR DEN KOPFBEREICH GEEIGNET. DAS SAUERSTOFFZELT DARF NICHT ÜBER DIE LIEGEFLÄCHE HINAUSRGEN.
Hill-Rom
A HILLENBRAND INDUSTRY
BETTWÄCHTER
PATIENTEN FUNKTIONSSPERREN
Century CC
P/N 45868 02

4586902


VORSICHT: BRANDGEFAHR, DIESES BETT IST FÜR DIE ANWENDUNG VON SAUERSTOFFGERÄTEN WIE NASENSYSTEME, SAUERSTOFFMASKEN, VENTILATOREN ODER SAUERSTOFFZELTE FÜR DEN KOPFBEREICH GEEIGNET. DAS SAUERSTOFFZELT DARF NICHT ÜBER DIE LIEGEFLÄCHE HINAUSRGEN.
Hill-Rom
A HILLENBRAND INDUSTRY
PATIENTEN FUNKTIONSSPERREN
Century CC
P/N 45869 02

2224702

3481102

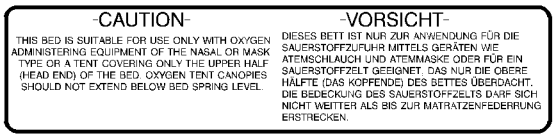
3665502

3672102

VORSICHT
TRANDELENBURG DARF NICHT IN BETRIEB GENOMMEN WERDEN, ES SEI DENN, DER FUSSTEIL DES BETTES IST DURCH HALTEVORRICHTUNGEN GESICHERT. SICHERN SIE DEN FUSSTEIL DES BETTES DURCH ZUSAMMENBINDEN DES FUSS UND KNIETEILS MIT KLETTENVERSCHLUSSBAND, DAS DURCH DIE SICHERUNGBANDBÜGEL AUF DER OBERSEITE DER LIEGEFLÄCHE GEFÜHRT WIRD. HALTEN SIE DAS KLETTENVERSCHLUSSBAND KURZ.

3608102

4401002

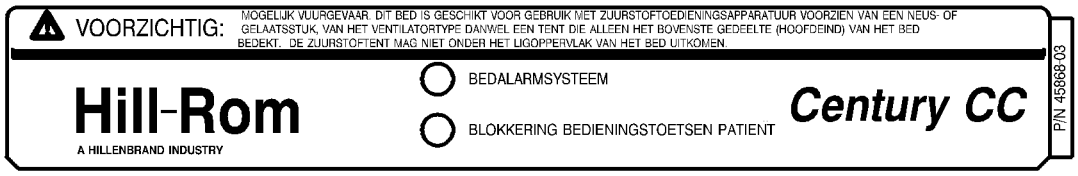

-CAUTION-
THIS BED IS SUITABLE FOR USE ONLY WITH OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL OR MASK TYPE OR A TENT COVERING ONLY THE UPPER HALF (HEAD END) OF THE BED. OXYGEN TENT CANOPIES SHOULD NOT EXTEND BELOW BED SPRING LEVEL.
-VORSICHT-
DIESES BETT IST NUR ZUR ANWENDUNG FÜR DIE SAUERSTOFFZUFUHR MITTELS GERÄTEN WIE ATEMSCHLAUCH UND ATEMMASKE ODER FÜR EIN SAUERSTOFFZELT GEEIGNET. DAS NUR DIE OBERE HÄLFTE (DAS KOPFENDE) DES BETTES ÜBERDACHT. DIE BEDECKUNG DES SAUERSTOFFZELTS DARF SICH NICHT WEITTER ALS BIS ZUR MATRATZENFEDERRUNG ERSTRECKEN.

416960102 or 416960202

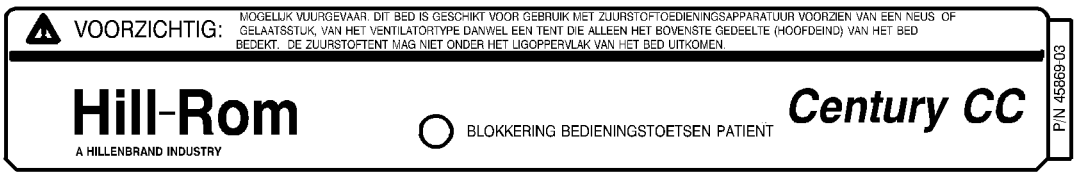
WARNUNG: ELEKTRISCH BETRIEBENE BETTFUNKTIONEN KÖNNEN ERNSTHAFTE VERLETZUNGEN VERURSACHEN. BEDIENUNG DES BETTES DARF NUR DURCH EINGEWIENSENE PERSONEN BEDIENT WERDEN.
ACHTUNG: ZIEHEN SIE DEN NETZSTECKER WÄHREND WARTUNG UND REINIGUNG HEREAUS. ZUSÄTZLICHE VORSICHTSMAßNAHMEN SIND IN DER GEBRAUCHSANWEISUNG UND DEM SERVICEHANDBUCH NACHZULESEN.

Figure 1-5. Warning and Caution Labels (Dutch)

4586803


VOORZICHTIG:
MOGELIJK VUURGEVAAR. DIT BED IS GESCHIKT VOOR GEBRUIK MET ZUURSTOFTOEDIENINGSAPPARATUUR VOORZIEN VAN EEN NEUS- OF GELAATSSTUK, VAN HET VENTILATORTYPE DANWEL EEN TENT DIE ALLEEN HET BOVENSTE GEDEELTE (HOOFDEIND) VAN HET BED BEDEKT. DE ZUURSTOFTENT MAG NIET ONDER HET LIGOPPERVLAK VAN HET BED UITKOMEN.
Hill-Rom
A HILLENBRAND INDUSTRY
BEDALARMSYSTEEM
BLOKKERING BEDIENINGSTOETSEN PATIENT
Century CC
P/N 45868-03

4586903


VOORZICHTIG:
MOGELIJK VUURGEVAAR. DIT BED IS GESCHIKT VOOR GEBRUIK MET ZUURSTOFTOEDIENINGSAPPARATUUR VOORZIEN VAN EEN NEUS OF GELAATSSTUK, VAN HET VENTILATORTYPE DANWEL EEN TENT DIE ALLEEN HET BOVENSTE GEDEELTE (HOOFDEIND) VAN HET BED BEDEKT. DE ZUURSTOFTENT MAG NIET ONDER HET LIGOPPERVLAK VAN HET BED UITKOMEN.
Hill-Rom
A HILLENBRAND INDUSTRY
BLOKKERING BEDIENINGSTOETSEN PATIENT
Century CC
P/N 45869-03

2224703

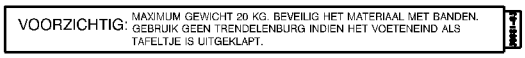
3481103

3665503

3672103

VOORZICHTIG
ZET HET BED ALLEEN IN DE TRENDELENBURG POSITIE ALS HET VOETENEIND VAST IS GEZET. MAAK HET VOETENEIND VAN HET BED VAST DOOR DE VOET-EN KNIESECTIE VAST TE ZETTEN MET HET KLITTEBAND DAT DOOR DE BEVESTIGINGSBEUGELS MOET WORDEN GEHAALD. BEVESTIGINGSBEUGELS BEVINDEN ZICH OP HET LIGOPPERVLAK.

3608103


VOORZICHTIG:
MAXIMUM GEWICHT 20 KG. BEVEILIG HET MATERIAAL MET BANDEN.
GEBRUIK GEEN TRENDELENBURG INDIEN HET VOETENEIND ALS TAPELTJE IS UITGEKLAPT.

4401003

-CAUTION-
THIS BED IS SUITABLE FOR USE ONLY WITH OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL OR MASK TYPE OR A TENT COVERING ONLY THE UPPER HALF (HEAD END) OF THE BED. OXYGEN TENT CANOPIES SHOULD NOT EXTEND BELOW BED SPRING LEVEL.
-VOORZICHTIG-
DIT BED IS ALLEEN GESCHIKT VOOR GEBRUIK MET ZUURSTOFTOEDIENINGSAPPARATUUR VOORZIEN VAN EEN NEUS- OF GELAATSSTUK DANWEL EEN TENT DIE ALLEEN HET BOVENSTE GEDEELTE (HOOFDEIND) VAN HET BED BEDEKT. HET ONDERSTE STUK VAN DE ZUURSTOFTENT MAG NIET ONDER HET LIGOPPERVLAK VAN HET BED UITKOMEN.

416960103 or 416960203

WAARSCHUWING: ELEKTRISCH VERSTELBARE ONDERDELEN VAN HET BED KUNNEN ERNSTIG LETSEL VEROORZAKEN. VERSTEL HET BED ALLEEN ALS PERSONEN VRIJ ZIJN VAN DE BEWEGENDE ONDERDELEN.
VOORZICHTIG: VERWIJDER DE STEKKER VAN HET BED UIT HET STOPCONTACT VOOR HET PLEGEN VAN ONDERHOUD OF HET SCHOONMAKEN VAN HET BED. RAADPLEEG DE ONDERHOUDSHANDLEIDING EN GEBRUIKSHANDLEIDING VOOR VERDERE VOORZORGSMAATREGELEN.

Chapter 2
Troubleshooting Procedures

2

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NOTES:

Getting Started

Begin each procedure in this chapter with step 1. Follow the sequence outlined (each step assumes the previous steps are correct). Each step is the normal operational event of the product and can be confirmed by answering Y (yes) or N (no) to the statement. Your response will lead to another step in the procedure, a repair analysis procedure (RAP), or a component replacement. If more than one component is listed, replace them in the order given.

Start with **Initial Actions** to begin gathering information about the problem.

Perform the **Function Checks** to isolate/identify a problem and to verify repair after completing each corrective action (replacing or adjusting a part, seating a connector, etc.).

Perform the **Final Actions** after the Function Checks to verify the repair.

If troubleshooting procedures do not isolate the problem, call Hill-Rom Technical Support at (800) 445-3720 for assistance.

WARNING:
Only facility authorized maintenance personnel should troubleshoot the Century CC Bed.

Initial Actions

2

Initial Actions are used to gather information from operators concerning problems with the Century CC Bed. Note symptoms or other information concerning the problem that the operator identifies. This information helps identify the probable cause.

1. Someone who can explain the problem is available.

   Yes **No**
   ↓ → Go to “Function Checks” on page 2-5.

2. Ask that person to demonstrate or explain the problem. The problem can be duplicated.

   Yes **No**
   ↓ → Go to “Function Checks” on page 2-5.

3. The problem is a result of improper operator action.

   Yes **No**
   ↓ → Go to “Function Checks” on page 2-5.

4. Instruct the operators to refer to the procedures in the *The Century CC Bed In-Service Manual*. Perform the “Function Checks” on page 2-5 to ensure proper operation of the Century CC Bed.

Function Checks

1. Initial actions have been performed.

   Yes **No**
   ↓ → Go to “Initial Actions” on page 2-4.

2. Press the hilow function switch to raise the bed. The bed up feature is operational.

   Yes **No**
   ↓ → Go to RAP 2.1

3. Press the hilow function switch to lower the bed. The bed down feature is operational.

   Yes **No**
   ↓ → Go to RAP 2.2

4. Press the head up function switch. The head up feature is operational.

   Yes **No**
   ↓ → Go to RAP 2.3

5. Press the head down function switch. The head down feature is operational.

   Yes **No**
   ↓ → Go to RAP 2.4

6. Press the knee up function switch. The knee up feature is operational.

   Yes **No**
   ↓ → Go to RAP 2.5

7. Press the knee down function switch. The knee down feature is operational.

   Yes **No**
   ↓ → Go to RAP 2.6

8. Press the power switch for the air system to the on position. The air system is operational.

   Yes **No**
   ↓ → Go to RAP 2.7

9. Using the manual pedals, raise the bed and the head and knee sections to the high position. After 30 minutes, check for drift. The hydraulic system is serviceable and all functions are drift free.

   Yes **No**
   ↓ → Go to RAP 2.8.

10. A display is visible on the scale unit.

    Yes **No**
    ↓ → Go to RAP 2.9.

11. Put a known weight on the sleep surface. Push the Weight button on the scale unit. The value in the display changes to reflect the correct added weight.

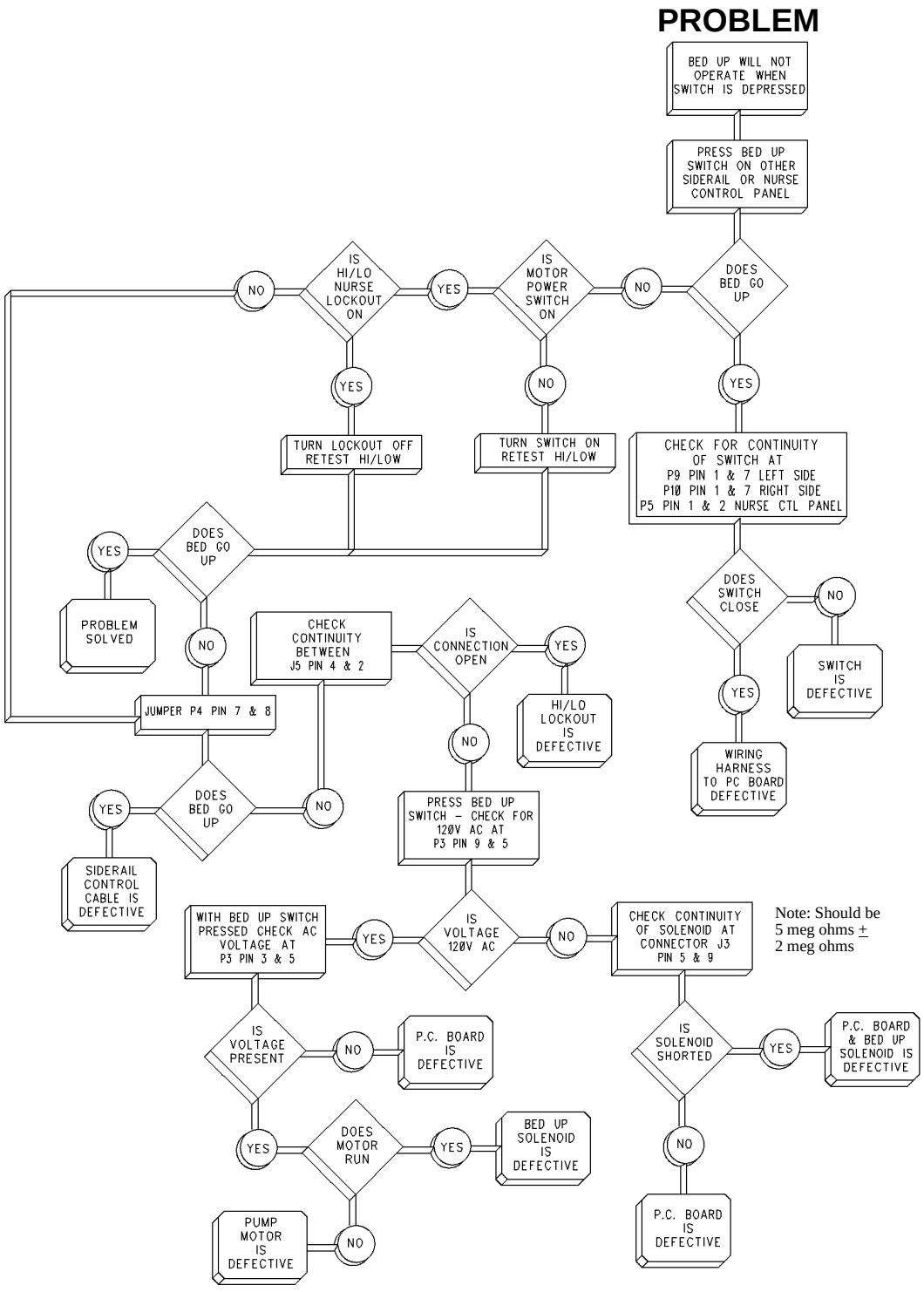
    Yes **No**
    ↓ → Go to RAP 2.10.

Final Actions

1. Complete the required preventive maintenance procedures. See “Preventive Maintenance” on page 6-5.

2. Complete all required administration tasks.

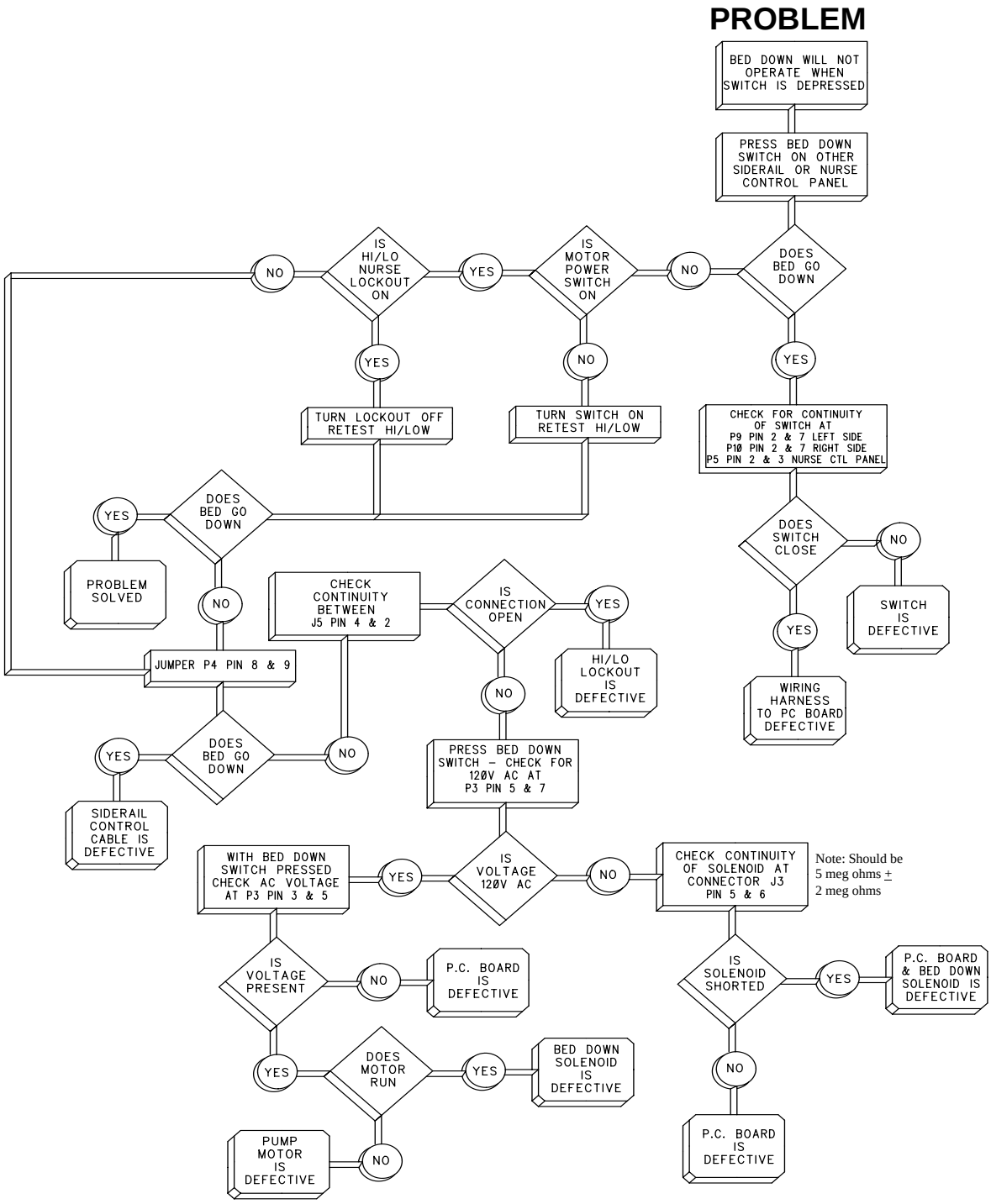
2.1 Bed Up Does Not Operate When Switch is Depressed.


PROBLEM
BED UP WILL NOT OPERATE WHEN SWITCH IS DEPRESSED
PRESS BED UP SWITCH ON OTHER SIDERAIL OR NURSE CONTROL PANEL
DOES BED GO UP
IS MOTOR POWER SWITCH ON
IS HI/LO NURSE LOCKOUT ON
NO
YES
TURN LOCKOUT OFF RETEST HI/LOW
TURN SWITCH ON RETEST HI/LOW
CHECK FOR CONTINUITY OF SWITCH AT P9 PIN 1 & 7 LEFT SIDE P10 PIN 1 & 7 RIGHT SIDE P5 PIN 1 & 2 NURSE CTL PANEL
DOES SWITCH CLOSE
SWITCH IS DEFECTIVE
WIRING HARNESS TO PC BOARD DEFECTIVE
PROBLEM SOLVED
CHECK CONTINUITY BETWEEN J5 PIN 4 & 2
IS CONNECTION OPEN
HI/LO LOCKOUT IS DEFECTIVE
JUMPER P4 PIN 7 & 8
PRESS BED UP SWITCH – CHECK FOR 120V AC AT P3 PIN 9 & 5
SIDERAIL CONTROL CABLE IS DEFECTIVE
WITH BED UP SWITCH PRESSED CHECK AC VOLTAGE AT P3 PIN 3 & 5
IS VOLTAGE 120V AC
CHECK CONTINUITY OF SOLENOID AT CONNECTOR J3 PIN 5 & 9
Note: Should be 5 meg ohms ± 2 meg ohms
IS VOLTAGE PRESENT
P.C. BOARD IS DEFECTIVE
IS SOLENOID SHORTED
P.C. BOARD & BED UP SOLENOID IS DEFECTIVE
DOES MOTOR RUN
BED UP SOLENOID IS DEFECTIVE
PUMP MOTOR IS DEFECTIVE
P.C. BOARD IS DEFECTIVE

Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

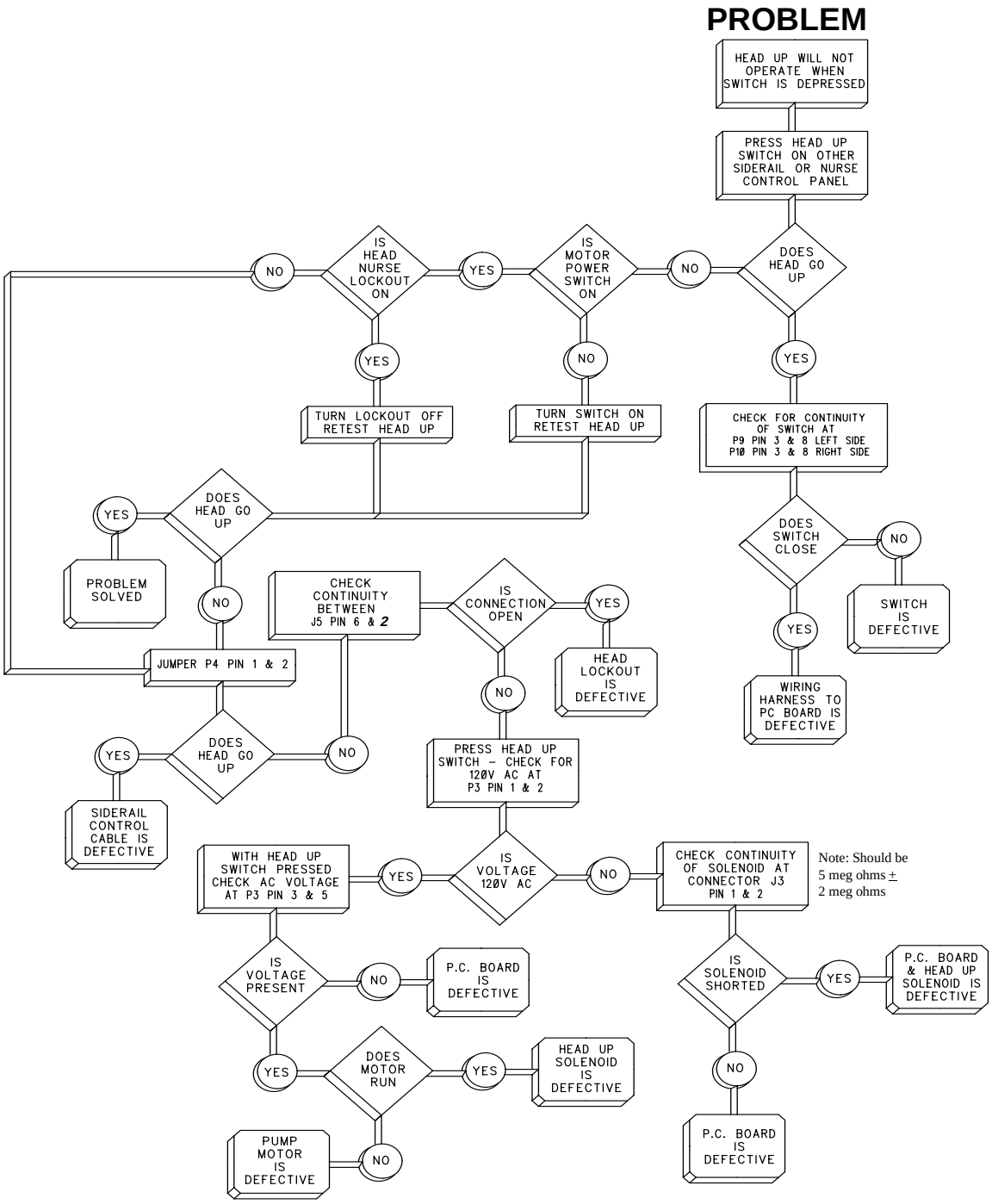
2

2.2 Bed Down Does Not Operate When Switch is Depressed.


PROBLEM
BED DOWN WILL NOT OPERATE WHEN SWITCH IS DEPRESSED
PRESS BED DOWN SWITCH ON OTHER SIDERAIL OR NURSE CONTROL PANEL
DOES BED GO DOWN
NO
YES
IS MOTOR POWER SWITCH ON
NO
YES
IS HI/LO NURSE LOCKOUT ON
NO
YES
TURN SWITCH ON RETEST HI/LOW
TURN LOCKOUT OFF RETEST HI/LOW
CHECK FOR CONTINUITY OF SWITCH AT
P9 PIN 2 & 7 LEFT SIDE
P10 PIN 2 & 7 RIGHT SIDE
P5 PIN 2 & 3 NURSE CTL PANEL
DOES SWITCH CLOSE
NO
YES
SWITCH IS DEFECTIVE
WIRING HARNESS TO PC BOARD DEFECTIVE
DOES BED GO DOWN
YES
NO
PROBLEM SOLVED
IS CONNECTION OPEN
YES
NO
HI/LO LOCKOUT IS DEFECTIVE
CHECK CONTINUITY BETWEEN J5 PIN 4 & 2
JUMPER P4 PIN 8 & 9
DOES BED GO DOWN
YES
NO
SIDERAIL CONTROL CABLE IS DEFECTIVE
PRESS BED DOWN SWITCH – CHECK FOR 120V AC AT P3 PIN 5 & 7
IS VOLTAGE 120V AC
YES
NO
WITH BED DOWN SWITCH PRESSED CHECK AC VOLTAGE AT P3 PIN 3 & 5
CHECK CONTINUITY OF SOLENOID AT CONNECTOR J3 PIN 5 & 6
Note: Should be 5 meg ohms ± 2 meg ohms
IS VOLTAGE PRESENT
NO
P.C. BOARD IS DEFECTIVE
IS SOLENOID SHORTED
YES
P.C. BOARD & BED DOWN SOLENOID IS DEFECTIVE
DOES MOTOR RUN
YES
BED DOWN SOLENOID IS DEFECTIVE
NO
PUMP MOTOR IS DEFECTIVE
P.C. BOARD IS DEFECTIVE

Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

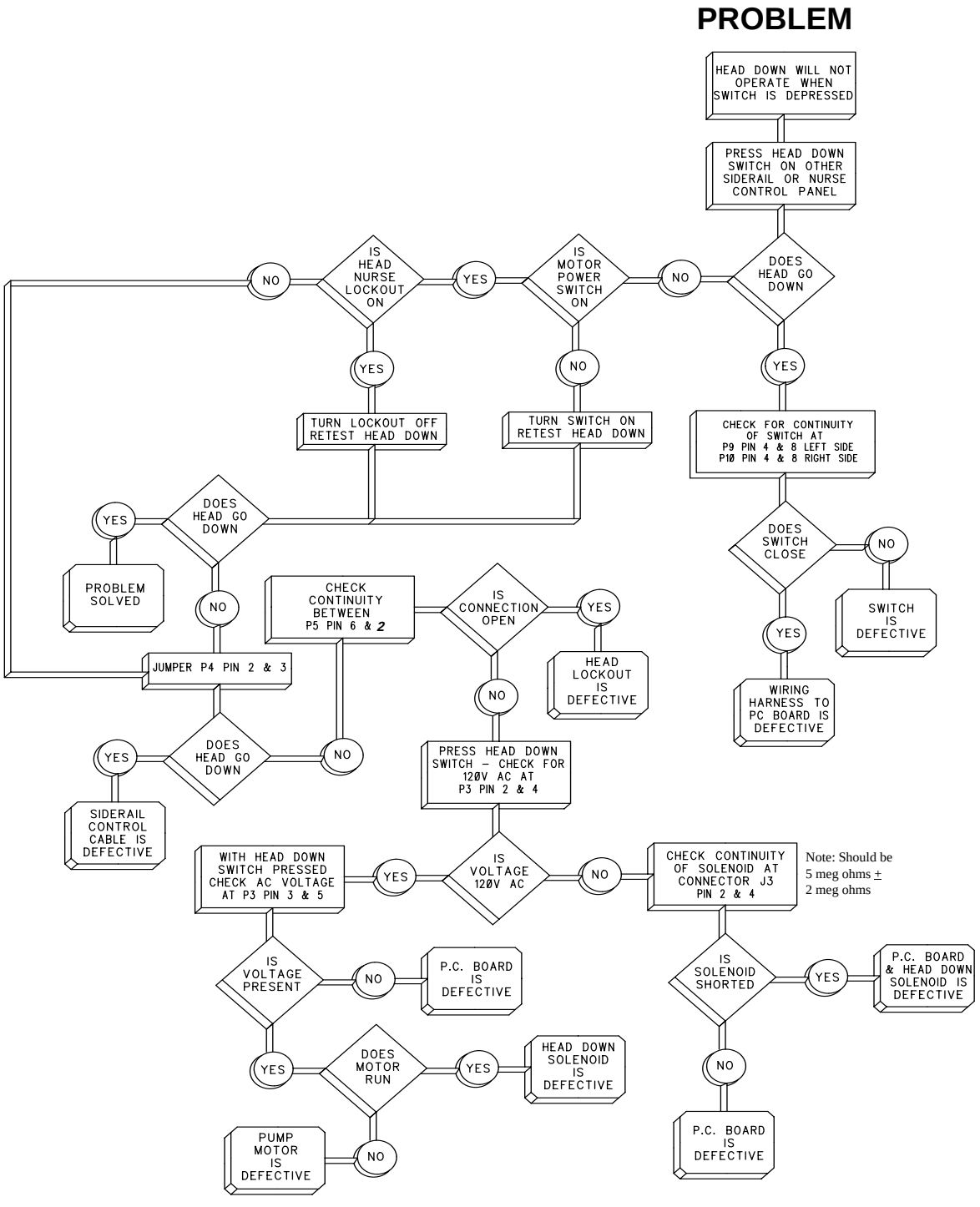
2.3 Head Up Does Not Operate When Switch is Depressed.


PROBLEM
HEAD UP WILL NOT OPERATE WHEN SWITCH IS DEPRESSED
PRESS HEAD UP SWITCH ON OTHER SIDERAIL OR NURSE CONTROL PANEL
DOES HEAD GO UP
YES
NO
IS MOTOR POWER SWITCH ON
IS HEAD NURSE LOCKOUT ON
TURN LOCKOUT OFF RETEST HEAD UP
TURN SWITCH ON RETEST HEAD UP
CHECK FOR CONTINUITY OF SWITCH AT P9 PIN 3 & 8 LEFT SIDE P10 PIN 3 & 8 RIGHT SIDE
DOES SWITCH CLOSE
SWITCH IS DEFECTIVE
WIRING HARNESS TO PC BOARD IS DEFECTIVE
PROBLEM SOLVED
JUMPER P4 PIN 1 & 2
CHECK CONTINUITY BETWEEN J5 PIN 6 & 2
IS CONNECTION OPEN
HEAD LOCKOUT IS DEFECTIVE
PRESS HEAD UP SWITCH – CHECK FOR 120V AC AT P3 PIN 1 & 2
SIDERAIL CONTROL CABLE IS DEFECTIVE
WITH HEAD UP SWITCH PRESSED CHECK AC VOLTAGE AT P3 PIN 3 & 5
IS VOLTAGE 120V AC
CHECK CONTINUITY OF SOLENOID AT CONNECTOR J3 PIN 1 & 2
Note: Should be 5 meg ohms ± 2 meg ohms
IS VOLTAGE PRESENT
P.C. BOARD IS DEFECTIVE
IS SOLENOID SHORTED
P.C. BOARD & HEAD UP SOLENOID IS DEFECTIVE
DOES MOTOR RUN
HEAD UP SOLENOID IS DEFECTIVE
PUMP MOTOR IS DEFECTIVE
P.C. BOARD IS DEFECTIVE

Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

2

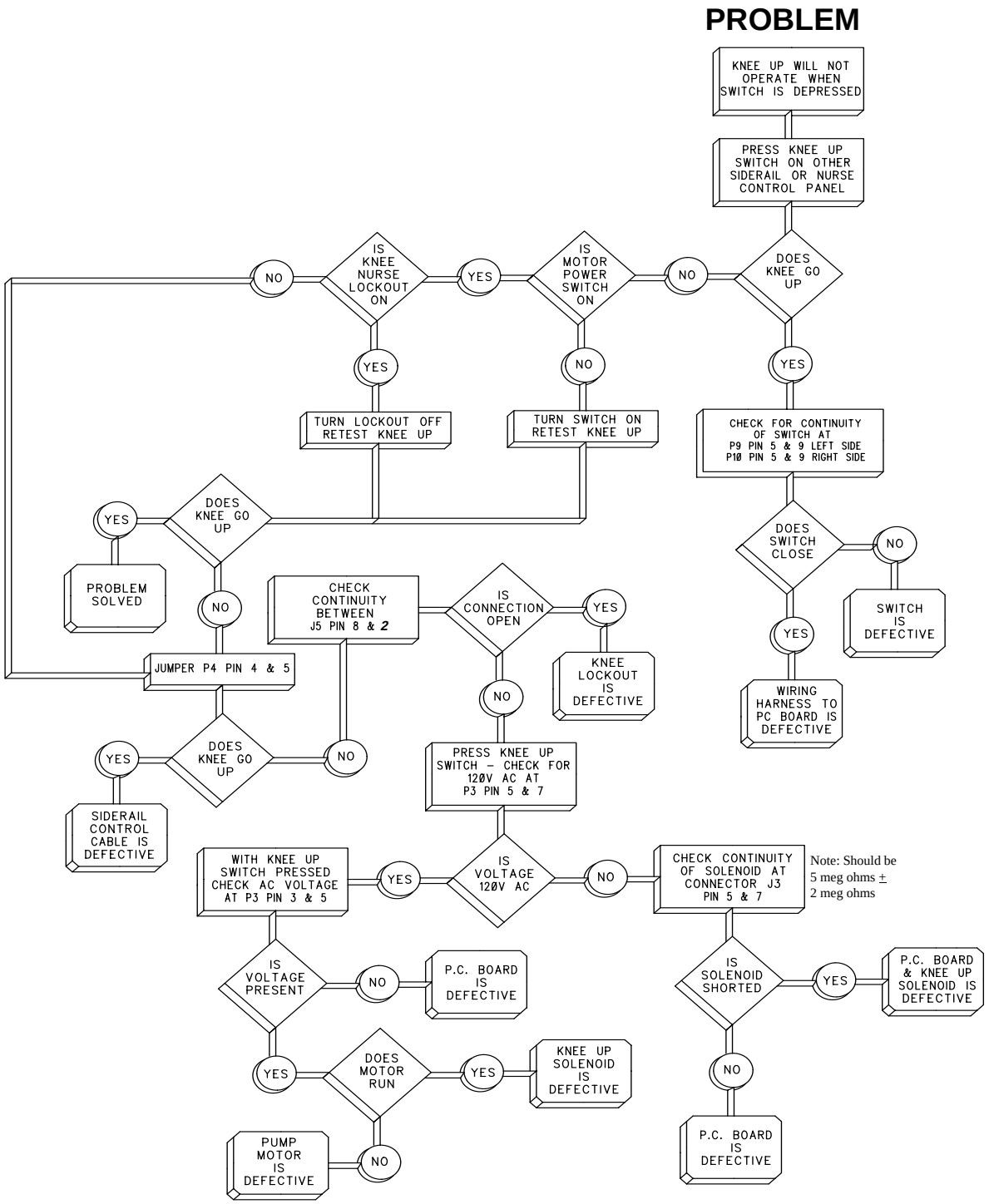
2.4 Head Down Does Not Operate When Switch is Depressed.


PROBLEM
HEAD DOWN WILL NOT OPERATE WHEN SWITCH IS DEPRESSED
PRESS HEAD DOWN SWITCH ON OTHER SIDERAIL OR NURSE CONTROL PANEL
DOES HEAD GO DOWN
NO
YES
IS MOTOR POWER SWITCH ON
NO
YES
IS HEAD NURSE LOCKOUT ON
NO
YES
TURN SWITCH ON RETEST HEAD DOWN
TURN LOCKOUT OFF RETEST HEAD DOWN
CHECK FOR CONTINUITY OF SWITCH AT P9 PIN 4 & 8 LEFT SIDE P10 PIN 4 & 8 RIGHT SIDE
DOES SWITCH CLOSE
NO
YES
SWITCH IS DEFECTIVE
WIRING HARNESS TO PC BOARD IS DEFECTIVE
DOES HEAD GO DOWN
YES
NO
PROBLEM SOLVED
CHECK CONTINUITY BETWEEN P5 PIN 6 & 2
IS CONNECTION OPEN
YES
NO
HEAD LOCKOUT IS DEFECTIVE
JUMPER P4 PIN 2 & 3
DOES HEAD GO DOWN
YES
NO
SIDERAIL CONTROL CABLE IS DEFECTIVE
PRESS HEAD DOWN SWITCH – CHECK FOR 120V AC AT P3 PIN 2 & 4
WITH HEAD DOWN SWITCH PRESSED CHECK AC VOLTAGE AT P3 PIN 3 & 5
YES
IS VOLTAGE 120V AC
NO
CHECK CONTINUITY OF SOLENOID AT CONNECTOR J3 PIN 2 & 4
Note: Should be 5 meg ohms ± 2 meg ohms
IS VOLTAGE PRESENT
NO
P.C. BOARD IS DEFECTIVE
IS SOLENOID SHORTED
YES
P.C. BOARD & HEAD DOWN SOLENOID IS DEFECTIVE
YES
DOES MOTOR RUN
YES
HEAD DOWN SOLENOID IS DEFECTIVE
NO
P.C. BOARD IS DEFECTIVE
PUMP MOTOR IS DEFECTIVE
NO

Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

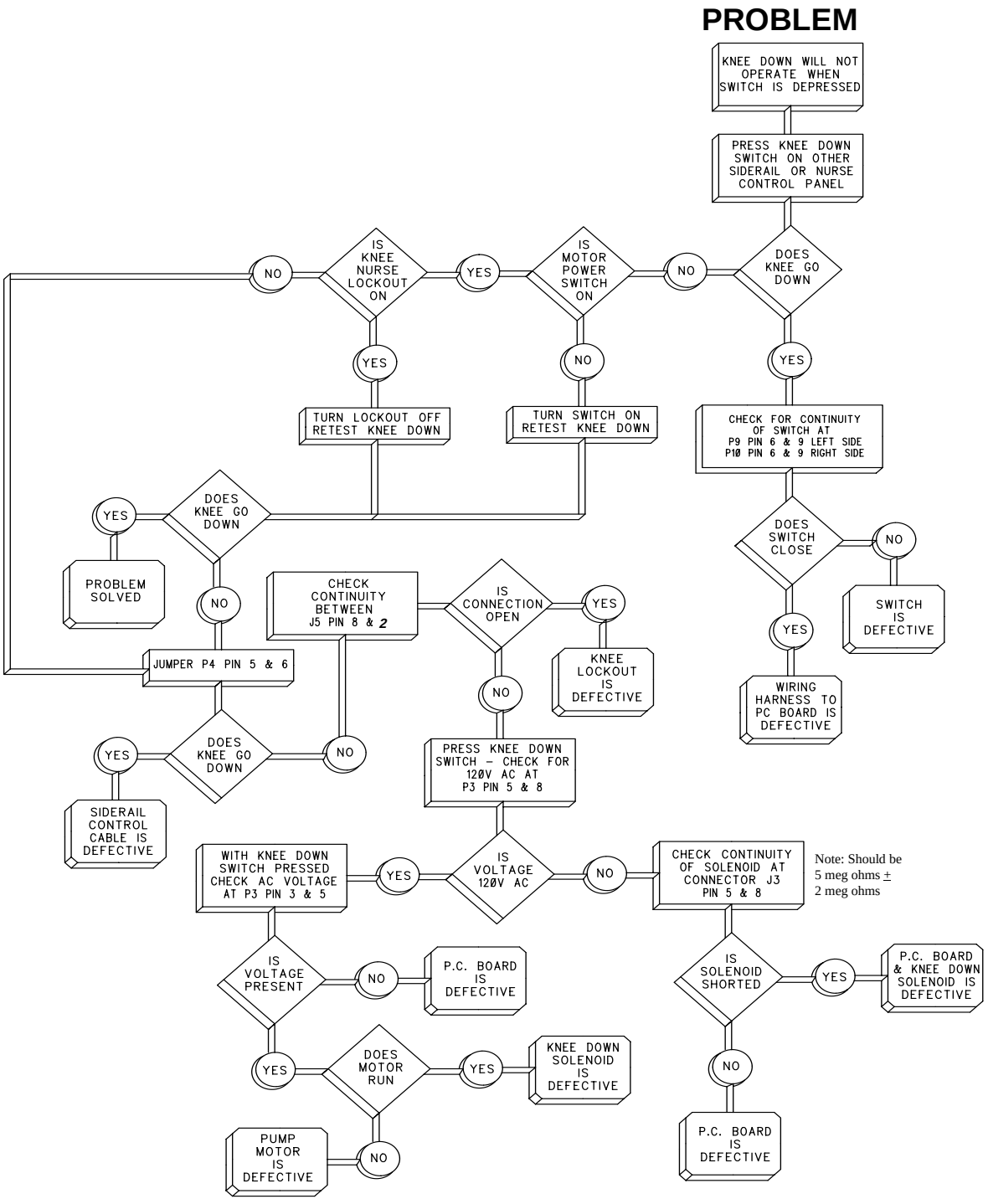
2

2.5 Knee Up Does Not Operate When Switch is Depressed.


PROBLEM
KNEE UP WILL NOT OPERATE WHEN SWITCH IS DEPRESSED
PRESS KNEE UP SWITCH ON OTHER SIDERAIL OR NURSE CONTROL PANEL
DOES KNEE GO UP
NO
YES
IS MOTOR POWER SWITCH ON
NO
YES
IS KNEE NURSE LOCKOUT ON
NO
YES
TURN SWITCH ON RETEST KNEE UP
TURN LOCKOUT OFF RETEST KNEE UP
CHECK FOR CONTINUITY OF SWITCH AT P9 PIN 5 & 9 LEFT SIDE P10 PIN 5 & 9 RIGHT SIDE
DOES SWITCH CLOSE
NO
YES
SWITCH IS DEFECTIVE
WIRING HARNESS TO PC BOARD IS DEFECTIVE
DOES KNEE GO UP
YES
NO
PROBLEM SOLVED
CHECK CONTINUITY BETWEEN J5 PIN 8 & 2
IS CONNECTION OPEN
YES
NO
KNEE LOCKOUT IS DEFECTIVE
JUMPER P4 PIN 4 & 5
DOES KNEE GO UP
YES
NO
SIDERAIL CONTROL CABLE IS DEFECTIVE
PRESS KNEE UP SWITCH - CHECK FOR 120V AC AT P3 PIN 5 & 7
IS VOLTAGE 120V AC
YES
NO
WITH KNEE UP SWITCH PRESSED CHECK AC VOLTAGE AT P3 PIN 3 & 5
CHECK CONTINUITY OF SOLENOID AT CONNECTOR J3 PIN 5 & 7
Note: Should be 5 meg ohms ± 2 meg ohms
IS VOLTAGE PRESENT
NO
P.C. BOARD IS DEFECTIVE
IS SOLENOID SHORTED
YES
P.C. BOARD & KNEE UP SOLENOID IS DEFECTIVE
DOES MOTOR RUN
YES
KNEE UP SOLENOID IS DEFECTIVE
PUMP MOTOR IS DEFECTIVE
NO
P.C. BOARD IS DEFECTIVE

Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

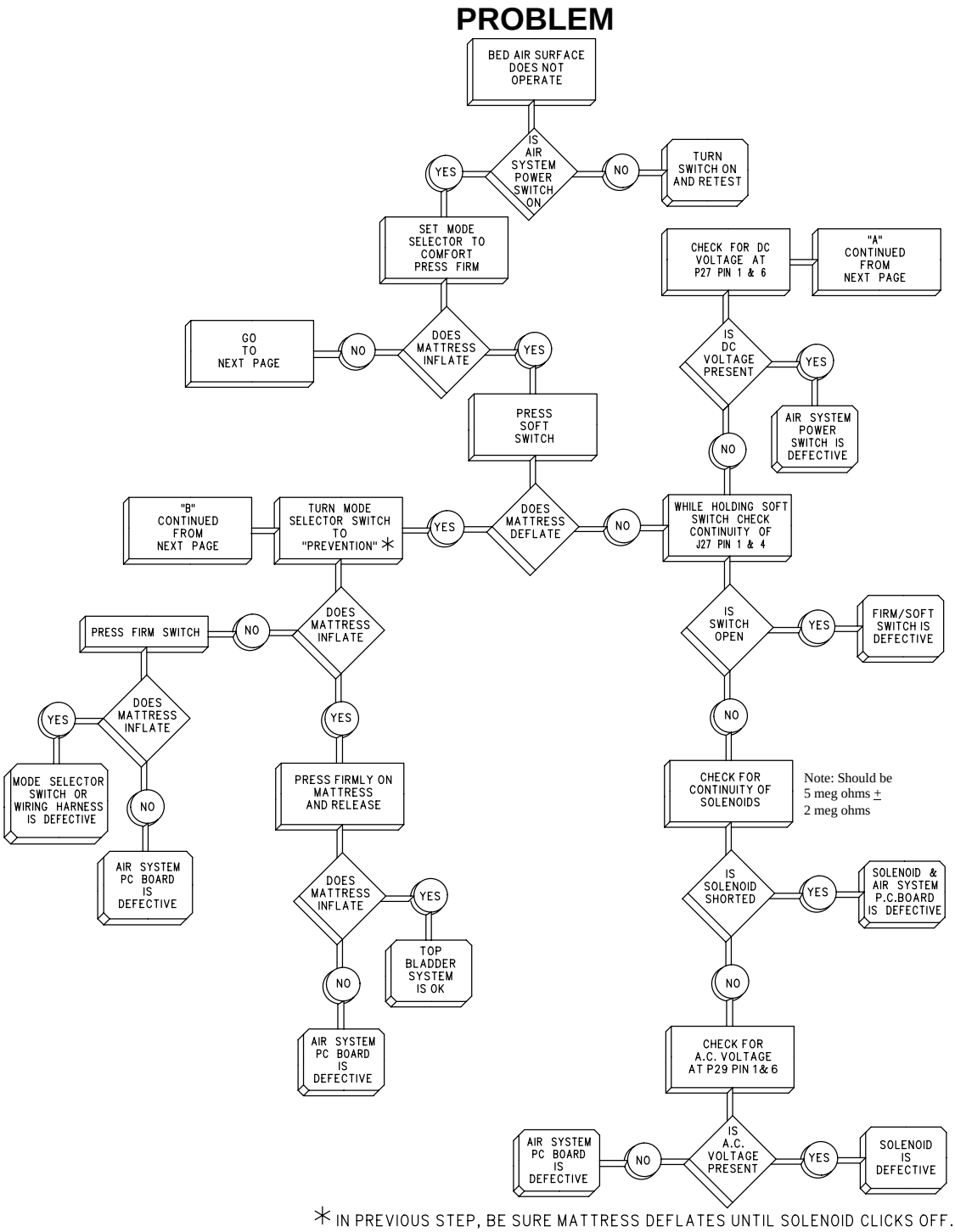
2.6 Knee Down Does Not Operate When Switch is Depressed.


PROBLEM
KNEE DOWN WILL NOT OPERATE WHEN SWITCH IS DEPRESSED
PRESS KNEE DOWN SWITCH ON OTHER SIDERAIL OR NURSE CONTROL PANEL
DOES KNEE GO DOWN
NO
YES
IS MOTOR POWER SWITCH ON
NO
YES
IS KNEE NURSE LOCKOUT ON
NO
YES
TURN SWITCH ON RETEST KNEE DOWN
TURN LOCKOUT OFF RETEST KNEE DOWN
CHECK FOR CONTINUITY OF SWITCH AT P9 PIN 6 & 9 LEFT SIDE P10 PIN 6 & 9 RIGHT SIDE
DOES SWITCH CLOSE
NO
YES
SWITCH IS DEFECTIVE
WIRING HARNESS TO PC BOARD IS DEFECTIVE
DOES KNEE GO DOWN
YES
NO
PROBLEM SOLVED
CHECK CONTINUITY BETWEEN J5 PIN 8 & 2
IS CONNECTION OPEN
YES
KNEE LOCKOUT IS DEFECTIVE
NO
JUMPER P4 PIN 5 & 6
DOES KNEE GO DOWN
YES
NO
SIDERAIL CONTROL CABLE IS DEFECTIVE
PRESS KNEE DOWN SWITCH – CHECK FOR 120V AC AT P3 PIN 5 & 8
WITH KNEE DOWN SWITCH PRESSED CHECK AC VOLTAGE AT P3 PIN 3 & 5
YES
IS VOLTAGE 120V AC
NO
CHECK CONTINUITY OF SOLENOID AT CONNECTOR J3 PIN 5 & 8
Note: Should be 5 meg ohms ± 2 meg ohms
IS VOLTAGE PRESENT
NO
P.C. BOARD IS DEFECTIVE
IS SOLENOID SHORTED
YES
P.C. BOARD & KNEE DOWN SOLENOID IS DEFECTIVE
YES
DOES MOTOR RUN
YES
KNEE DOWN SOLENOID IS DEFECTIVE
NO
PUMP MOTOR IS DEFECTIVE
NO
P.C. BOARD IS DEFECTIVE

Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

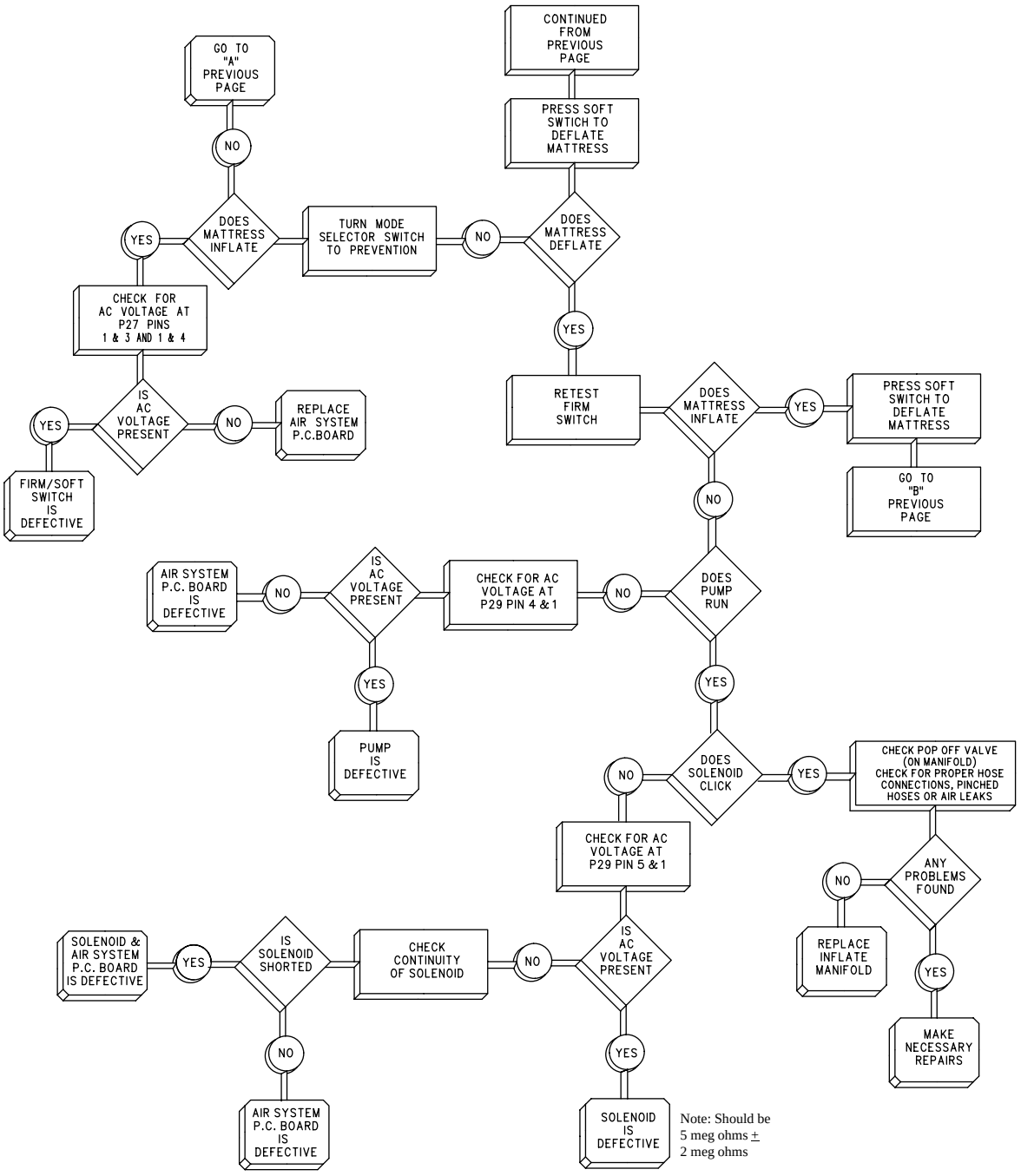
NOTES:

2.7 Bed Air Surface Does Not Operate When Switch is Depressed.


PROBLEM
BED AIR SURFACE DOES NOT OPERATE
IS AIR SYSTEM POWER SWITCH ON
YES
NO
TURN SWITCH ON AND RETEST
SET MODE SELECTOR TO COMFORT PRESS FIRM
CHECK FOR DC VOLTAGE AT P27 PIN 1 & 6
"A" CONTINUED FROM NEXT PAGE
GO TO NEXT PAGE
DOES MATTRESS INFLATE
IS DC VOLTAGE PRESENT
AIR SYSTEM POWER SWITCH IS DEFECTIVE
PRESS SOFT SWITCH
"B" CONTINUED FROM NEXT PAGE
TURN MODE SELECTOR SWITCH TO "PREVENTION" ✳
DOES MATTRESS DEFLATE
WHILE HOLDING SOFT SWITCH CHECK CONTINUITY OF J27 PIN 1 & 4
PRESS FIRM SWITCH
IS SWITCH OPEN
FIRM/SOFT SWITCH IS DEFECTIVE
MODE SELECTOR SWITCH OR WIRING HARNESS IS DEFECTIVE
AIR SYSTEM PC BOARD IS DEFECTIVE
PRESS FIRMLY ON MATTRESS AND RELEASE
CHECK FOR CONTINUITY OF SOLENOIDS
Note: Should be 5 meg ohms ± 2 meg ohms
TOP BLADDER SYSTEM IS OK
IS SOLENOID SHORTED
SOLENOID & AIR SYSTEM P.C.BOARD IS DEFECTIVE
CHECK FOR A.C. VOLTAGE AT P29 PIN 1& 6
IS A.C. VOLTAGE PRESENT
SOLENOID IS DEFECTIVE
✳ IN PREVIOUS STEP, BE SURE MATTRESS DEFLATES UNTIL SOLENOID CLICKS OFF.

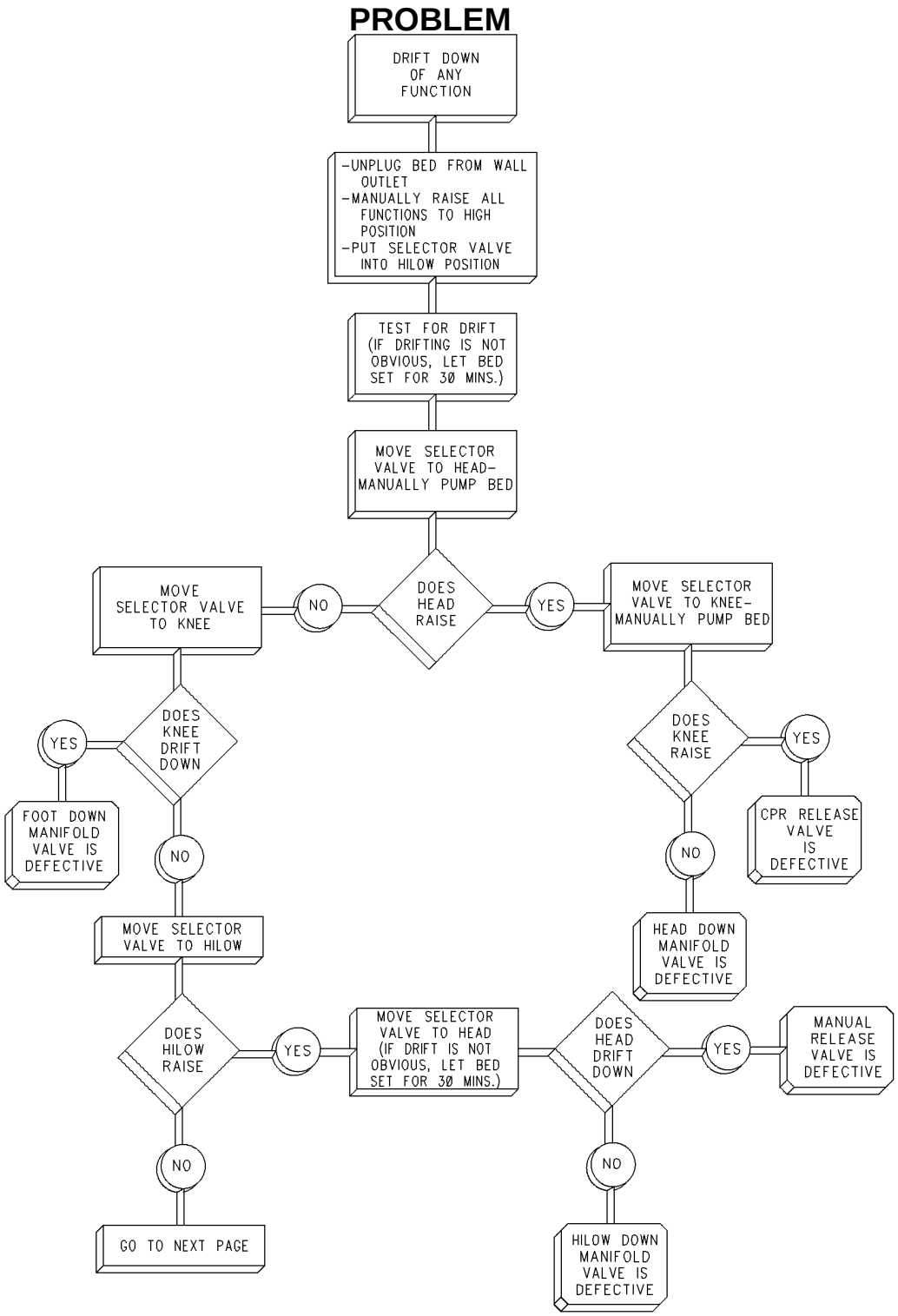
Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

2



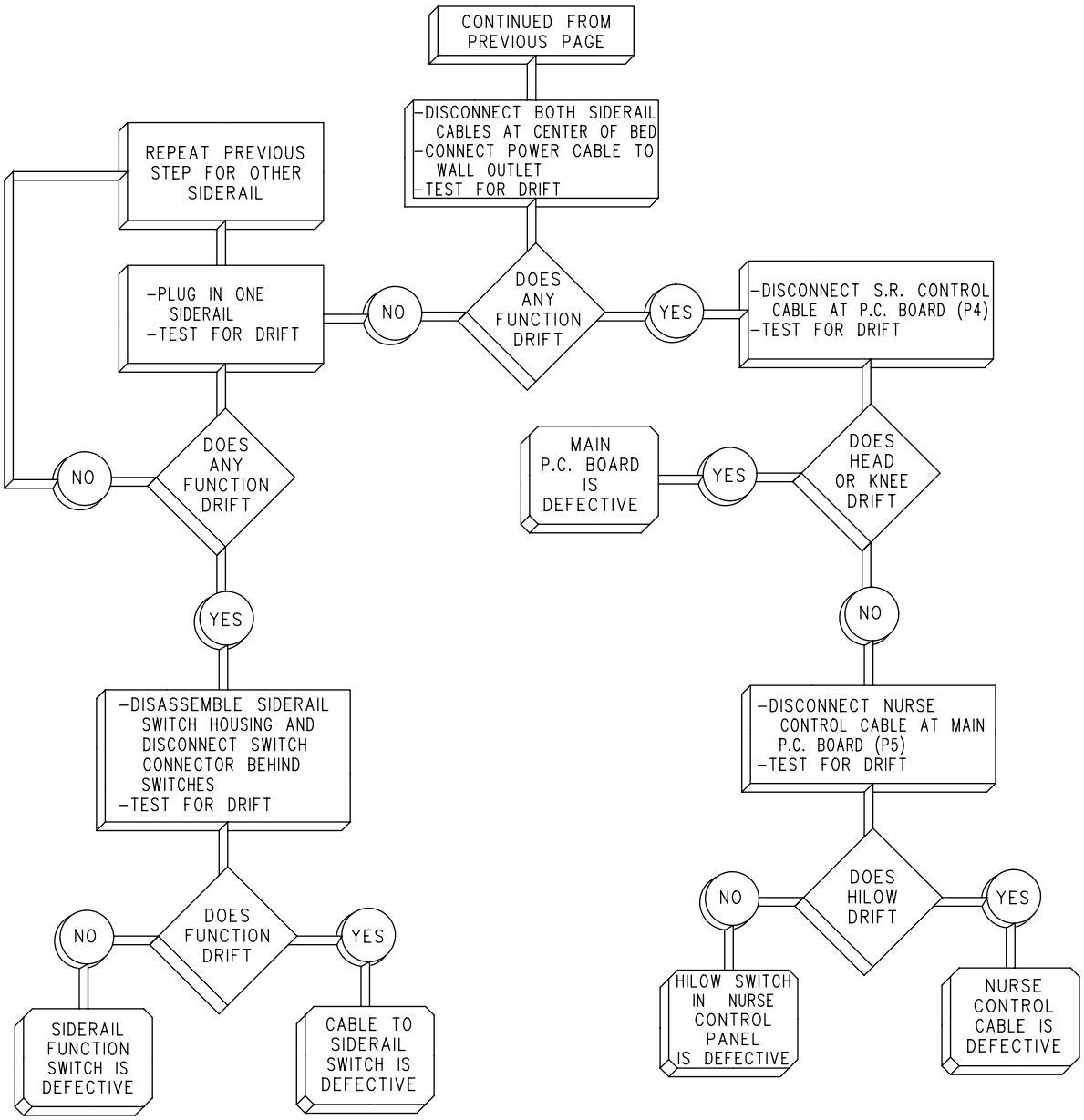
Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

2.8 Drift Down of any Function.


PROBLEM
DRIFT DOWN OF ANY FUNCTION
-UNPLUG BED FROM WALL OUTLET
-MANUALLY RAISE ALL FUNCTIONS TO HIGH POSITION
-PUT SELECTOR VALVE INTO HILOW POSITION
TEST FOR DRIFT (IF DRIFTING IS NOT OBVIOUS, LET BED SET FOR 30 MINS.)
MOVE SELECTOR VALVE TO HEAD- MANUALLY PUMP BED
DOES HEAD RAISE
NO
MOVE SELECTOR VALVE TO KNEE
YES
MOVE SELECTOR VALVE TO KNEE- MANUALLY PUMP BED
DOES KNEE DRIFT DOWN
YES
FOOT DOWN MANIFOLD VALVE IS DEFECTIVE
NO
DOES KNEE RAISE
YES
CPR RELEASE VALVE IS DEFECTIVE
NO
HEAD DOWN MANIFOLD VALVE IS DEFECTIVE
MOVE SELECTOR VALVE TO HILOW
DOES HILOW RAISE
YES
MOVE SELECTOR VALVE TO HEAD (IF DRIFT IS NOT OBVIOUS, LET BED SET FOR 30 MINS.)
DOES HEAD DRIFT DOWN
YES
MANUAL RELEASE VALVE IS DEFECTIVE
NO
GO TO NEXT PAGE
NO
HILOW DOWN MANIFOLD VALVE IS DEFECTIVE

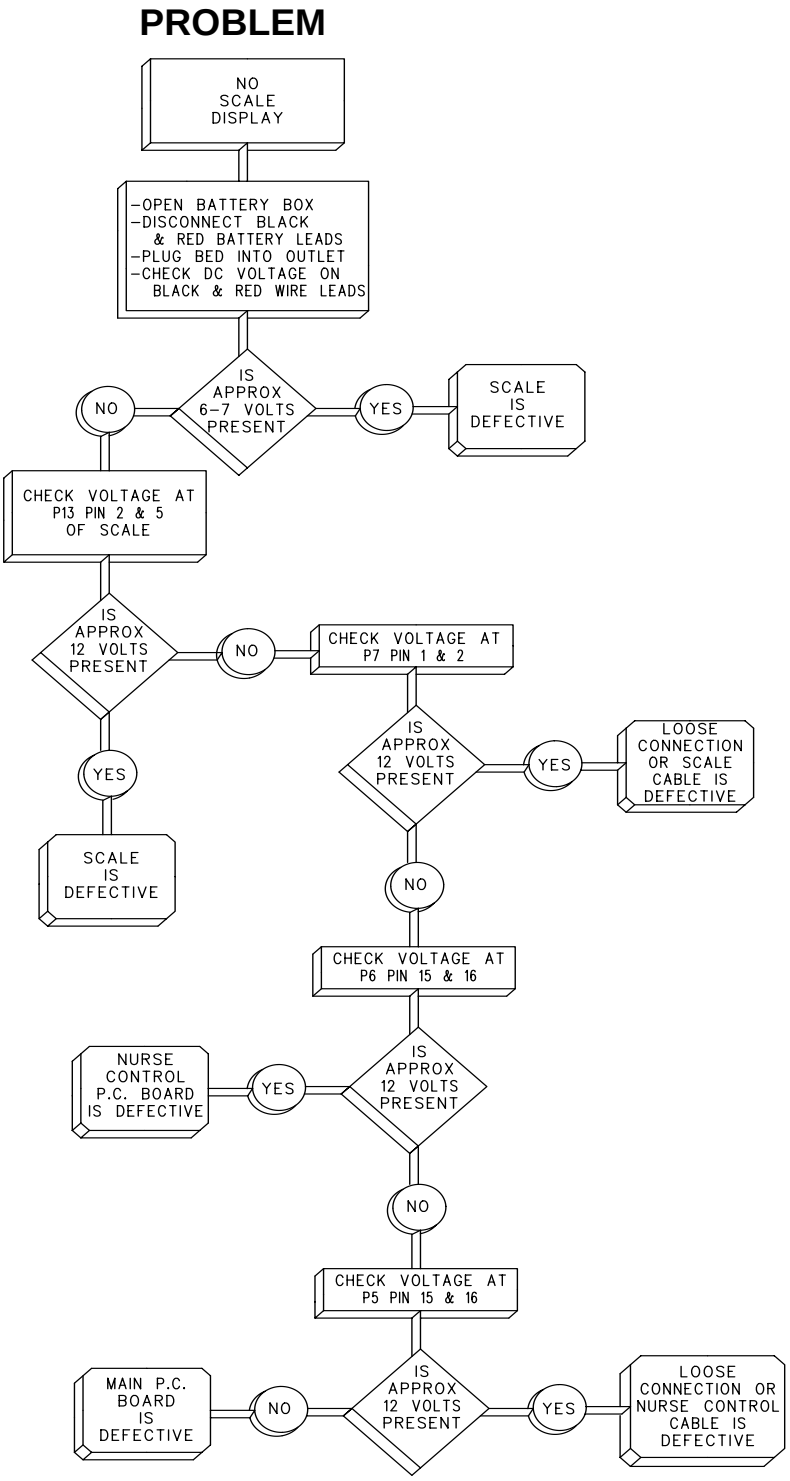
Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

2



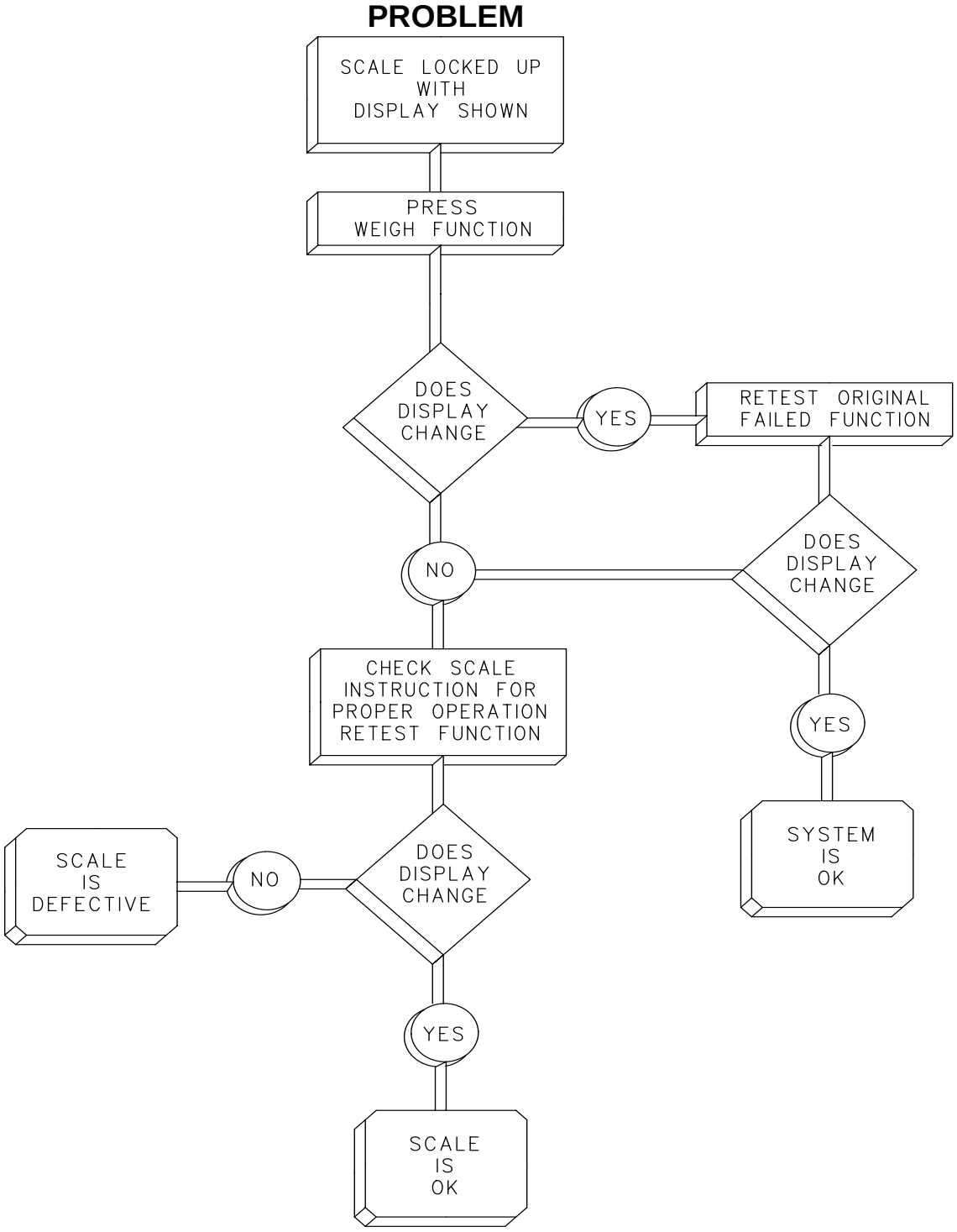
Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

2.9 No Scale Display.


PROBLEM
NO SCALE DISPLAY
-OPEN BATTERY BOX
-DISCONNECT BLACK & RED BATTERY LEADS
-PLUG BED INTO OUTLET
-CHECK DC VOLTAGE ON BLACK & RED WIRE LEADS
IS APPROX 6-7 VOLTS PRESENT
NO
YES
SCALE IS DEFECTIVE
CHECK VOLTAGE AT P13 PIN 2 & 5 OF SCALE
IS APPROX 12 VOLTS PRESENT
NO
CHECK VOLTAGE AT P7 PIN 1 & 2
YES
SCALE IS DEFECTIVE
IS APPROX 12 VOLTS PRESENT
YES
LOOSE CONNECTION OR SCALE CABLE IS DEFECTIVE
NO
CHECK VOLTAGE AT P6 PIN 15 & 16
NURSE CONTROL P.C. BOARD IS DEFECTIVE
YES
IS APPROX 12 VOLTS PRESENT
NO
CHECK VOLTAGE AT P5 PIN 15 & 16
MAIN P.C. BOARD IS DEFECTIVE
NO
IS APPROX 12 VOLTS PRESENT
YES
LOOSE CONNECTION OR NURSE CONTROL CABLE IS DEFECTIVE

Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

2.10 Scale Locked Up With a Display Shown.



Note: Check the fuses on VDE configured beds prior to the start of troubleshooting.

NOTES:

Chapter 3
Theory of Operation

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3

General Operation

The Hill-Rom Century CC Bed incorporates a dual control system. Either electric or manual bed controls can be used independently or together to activate the following bed features.

- Bed height (hilow)—up/down
- Foot section—up/down
- Head section—up/down

These features are governed electrically by circuit board logic and can be accessed by both the patient or attendant using the siderail or by the attendant using the nurse control panel. The manual bed controls are only accessible to the patient attendant. They are activated using the selector lever and the up or down pedal assemblies located conveniently on each side of the bed.

Sleep Surface

The surface of the model 895 and 896 beds consists of The DynamicAire Sleep Surface (mattress) which is constructed with two air bladders encompassed with foam. This integrated air support system is a closed system electronically monitored to assure proper inflation. The system can be operated in two modes, comfort and prevention. The DynamicAire Sleep Surface is designed so that the surface is non-reversible, yet easily removable. It has a life expectancy of five years or more based upon Hill-Rom recommended operating and cleaning procedures.

The surface of the model 892 and 894 beds is equipped with a Comfortline CC Mattress. This is a pressure reducing mattress designed to improve patient comfort and reduce interface pressure.

Automatic Contour

Every Century CC Bed has a feature called automatic contour that raises the knee section of the bed a full 14° automatically when the head section is raised. The purpose of this feature is to prevent patients from sliding to the foot end of the bed when the head section is raised. This feature is controlled by means of limit switches. The switch to deactivate the automatic contour feature is located in the nurse control panel.

Head and Foot Panels

The head and foot panels have multi-piece blow molded plastic construction with internal reinforcing, HPL decorator panel, and steel tubing inserts used for mounting. The panels also have built-in handles that aid in steering control. If you need to replace parts or an entire bed end, refer to Chapter 5 for the correct part numbers. When ordering an HPL decorator panel or an entire panel assembly, you will need to specify the color of the decorator panel. If the color is not known, please send a 2-3" (50-76 mm) square of the old HPL decorator panel for color matching.

Head Panel

Century CC Beds have post type mounts for the head panel. The head panel simply slides down on two vertical posts at each head end corner of the bed. The head panel is not secured in place, so removal is just a matter of lifting it vertically off the mounting posts. The head panel can be used under the patient during CPR procedures or for bed length extension.

Head Panel—Bed Extender

The standard Bed Extender accommodates taller patients. You can add 15" (38 mm) to the overall bed length by pivoting the mattress stops toward the end of the bed, and by sliding the headboard on to the stops. The convertible foot panel must be in the extended position to accommodate the head panel. The movable frame is then pinned to secure the frame. Optional extender mattress pads are available.

Foot Panel—Convertible Foot Panel

The standard foot panel is secured to a movable frame at the foot end of the bed. The frame can be rotated to place the foot panel in a horizontal position over the foot section of the bed. In this position the foot panel will support a maximum of 45 pounds (20 kg) of life support equipment during patient transfer. It can also be used as a temporary work surface for general nursing activities during non-transfer situations.

Modular Headwall Compatibility

The Century CC Beds are fully compatible with modular headwalls when equipped with the Model 290-48 Cane Bumpers. These attach at the head end

of the bed. Standard spring loaded roller bumpers are not compatible with modular headwalls.

Siderails

Siderail Construction

Siderail frames are of a welded construction that secures their upper frames, pivot arm, and mounting frames together as an inseparable assembly. The individual welded components of the siderail frames are not offered as service replacement parts.

Siderail Operation

Both head and foot siderails rotate away from the center of the bed. To operate the siderail from the high position, press and release the push button to lower it to the intermediate position, or hold the button in to lower it to the full down position. The push button does not need to be depressed to raise the siderail.

To store the siderail, rotate it to the full down position and simply push the siderail in underneath the sleep surface. The siderail can only be stored when it is in the full down position.

Bed Scale

Before Operating Scale

The scale is very sensitive. The most accurate weight reading will be achieved if the bed is not touching anything. This includes the headwall, lines such as those from ventilators, drainage bags, and anything else that could impact the weight and cause an incorrect weight to appear in the display.

It is important that no one touch the sleep surface of the bed while the scale is operating. This could add several pounds to the weight display.

New Patient Weighing

Before placing a new patient on the bed, the sleep surface must be prepared to accurately weigh the patient. This includes placing all pillows, blankets, and any other items that the patient will be using, on the bed before you zero the scale. You might want to place a list of these items near the bedside for future reference.

Scale Operation

Zero the Scale (Early Version)

Zero the scale using the following procedure:

- Press and hold the ZERO switch.
- Press and release the READ switch.
- Release the ZERO switch. The display will blink on and off and then sound a beep. An empty bed (tare) weight will then be displayed.
- If “LB” appears in the upper right corner of the display, press the UNITS switch to select “KG”.
- After the display blinks, touch the READ switch and verify the displayed weight is 0.000 kg $\pm$ 0.1.

Zero the Scale (Current Version)

Zero the scale using the following procedure:

- Press and hold the ZERO switch (000.0) for 2 1/2 seconds until two beeps sound.
- Release the ZERO switch. The display will blink on and off for 6 seconds and then sound a single beep. An empty bed value will then be displayed for 10 seconds after which dual beeps sound and the display reverts to 000.0.
- 000.0 will now appear in the display.

Initial Weighing Of The Patient (Early Version)

Place the patient on the bed. Touch the READ switch to weigh the patient. After a few seconds the system will beep, and display the patient’s weight.

Initial Weighing Of The Patient (Current Version)

Place the patient on the bed. Touch the WEIGHT switch to weigh the patient. The system will beep, and the display will blink for 6 seconds followed by a single beep. The patient’s weight is now displayed.

Changing The Items On The Bed (Early Version)

During the patient’s stay in the hospital, things will be added to and removed from the bed. To account for the weight of items placed on or taken off of the

bed surface without affecting the patient's weight reading, perform the following.

- Press and release the READ switch.
- Add or remove the items to or from the bed.
- Press and release the READ switch.
- When the new weight appears, press and hold the ZERO switch.
- Press and release the READ switch and then release the ZERO switch. The revised weight will be displayed.
- Weight the patient to ensure the patient weight was not altered.

Changing The Items On The Bed (Current Version)

During the patient's stay in the hospital, things will be added to and removed from the bed. To account for the weight of items placed on or taken off of the bed surface without affecting the patient's weight reading, use the CHANGE ITEMS switch.

- Press and release the WEIGHT switch. Within 10 seconds of the new patient weight being displayed, press and release the CHANGE ITEMS switch. The system will beep once.
- Add or remove the items to or from the bed.
- Press and release the CHANGE ITEMS switch. The system will beep once. The display will blink until a single beep is heard and then the patient's original weight reading will be displayed.

Manually Adjusting Patient Weight (Early Version)

The displayed weight can be manually overridden if necessary using the ZERO switch. Use the adjust weight feature if an incorrect weight display needs to be corrected or if the exact weight of the item being placed on or removed from the bed is known.

For example, if the patient has received a cast, the added weight of the cast needs to be accounted for. If the weight is not accounted for when the patient is placed back on the bed, the weight reading that is displayed will be incorrect. The scale will display the patient's weight plus the weight of the cast. The following procedure should be used to return the display to the patient's original weight:

Adding weight

- Press and hold the ZERO switch.
- Use the digit keys to enter the change in tare weight.
- Release the ZERO switch. When the display blinks the new tare weight has been entered.

Removing weight

- Press and hold the ZERO switch.
- Press the left most digit key eight times. A minus (-) sign will appear in the display.
- Use the digit keys to enter the change in tare weight.
- Release the ZERO switch. When the display blinks the new tare weight has been entered.

Manually Adjusting Patient Weight (Current Version)

The displayed weight can be manually overridden if necessary using the ADJUST WEIGHT switch (+ and –). Use the adjust weight feature if an incorrect weight display needs to be corrected or if the exact weight of the item being placed on or removed from the bed is known.

For example, if the patient has received a cast, the added weight of the cast needs to be accounted for. If the weight is not accounted for when the patient is placed back on the bed, the weight reading that is displayed will be incorrect. The scale will display the patient's weight plus the weight of the cast. The minus (–) button should be used to return the display to the patient's original weight.

To manually adjust the displayed weight:

- Press and release the WEIGHT switch. Within 10 seconds of the new patient weight being displayed, press and hold or release the ADJUST WEIGHT (+ or -) switch until the correct weight is displayed. If any other key is pressed during this process, the adjust weight function will cancel out.
- After 10 seconds of no weight adjustments, dual beeps will sound, and the displayed weight will become the new patient weight.

Motor Assembly

General Description

The motor on the Century CC Bed is a simple direct drive motor. Thermals are an integral part of the motor, protecting it from an overload condition. The motor will stop automatically if heat builds up to an unacceptable temperature. The motor will not operate again until it has cooled, and the thermal has reset itself.

3

P.C. Board Wiring Diagram—Air Board Assembly

Figure 3-1. Air Board Assembly—P/N 38208 (Early Version)

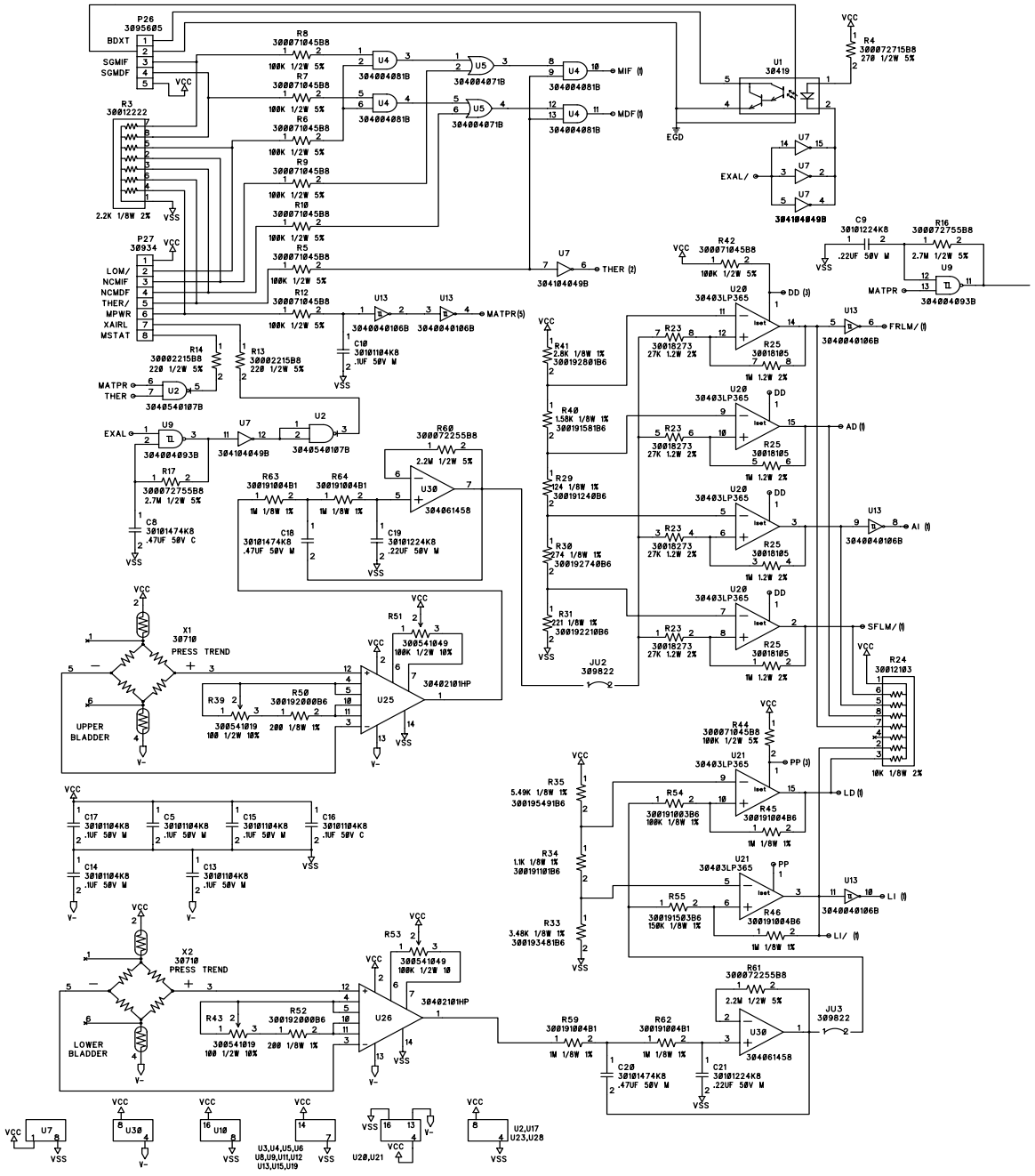

Figure 3-2. Air Board Assembly—P/N 38208 (Early Version—continued)

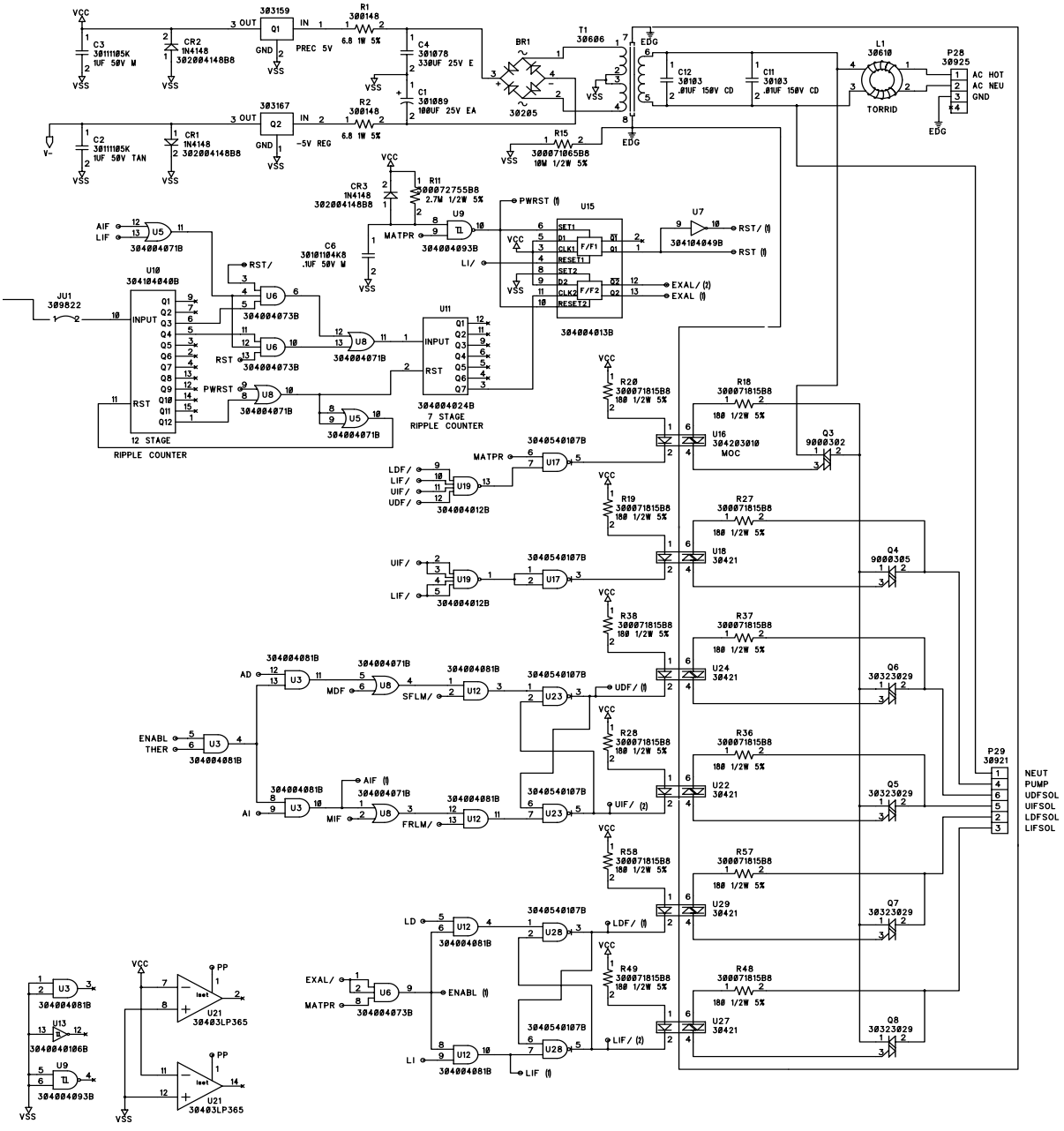

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Figure 3-3. Air Board Assembly—P/N 44047-01 (Early Version)

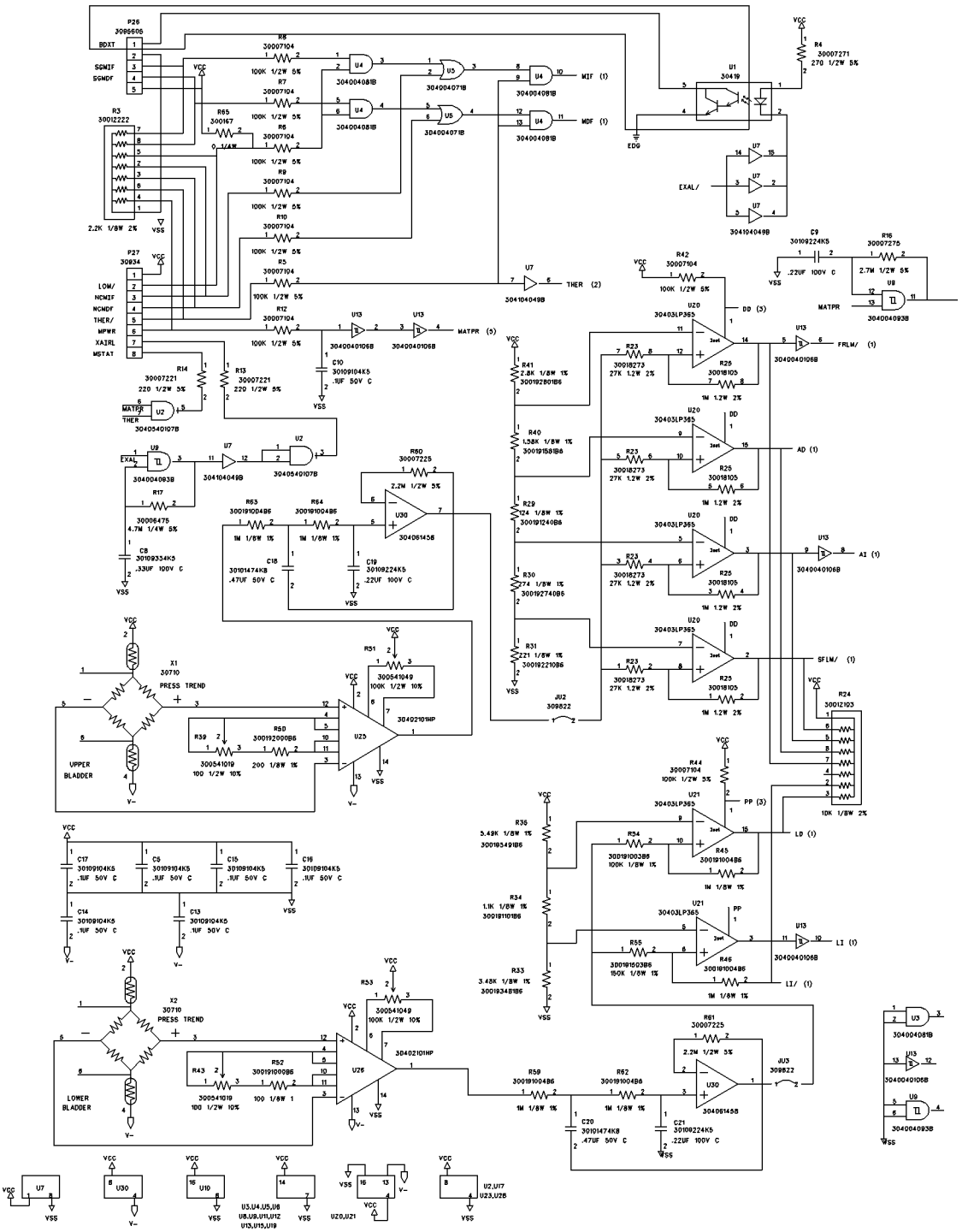

Figure 3-4. Air Board Assembly—P/N 44047-01 (Early Version—continued)

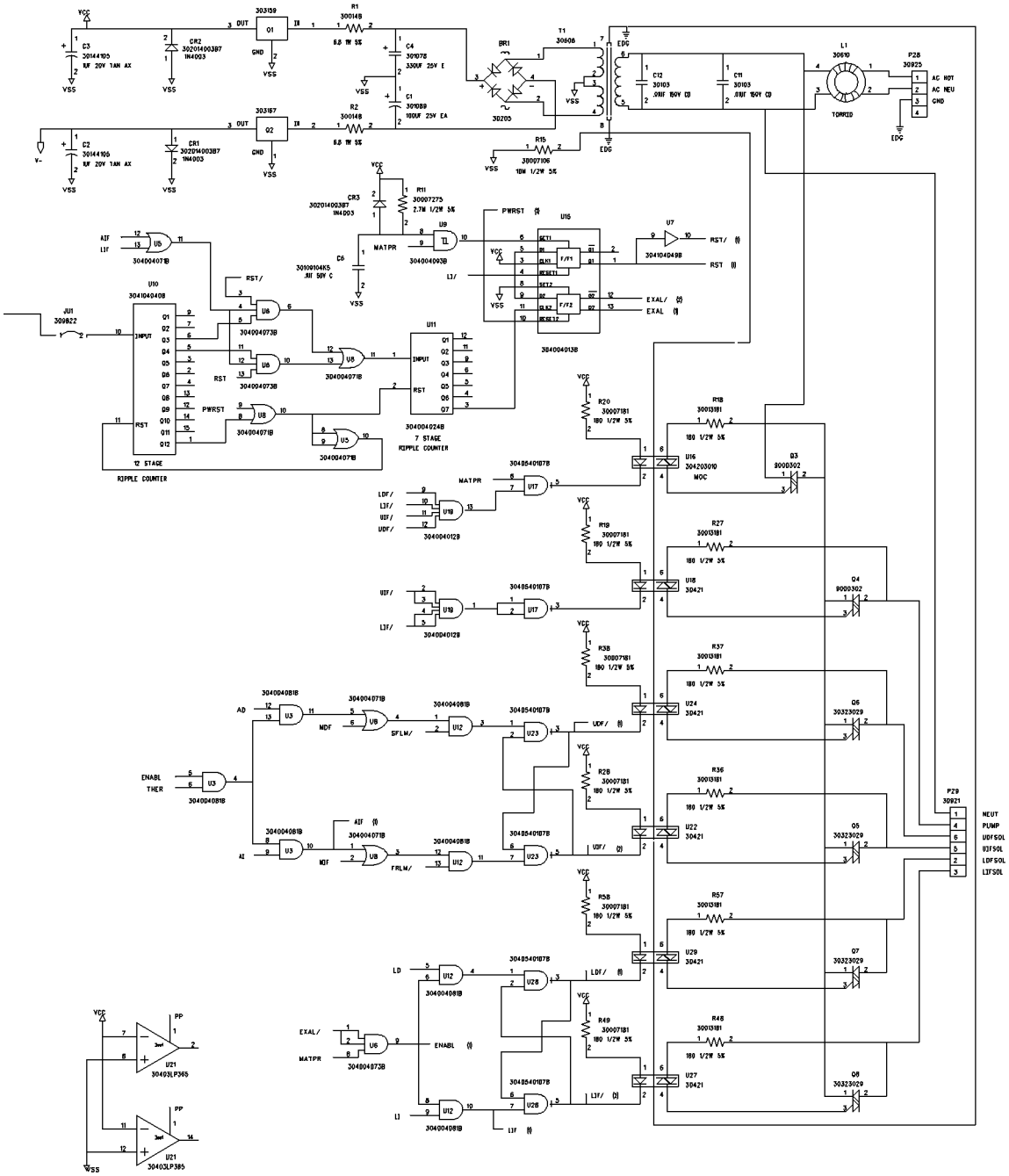

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Figure 3-5. Air Board Assembly—P/N 45904 (Early Version, Sheet 1 of 2)

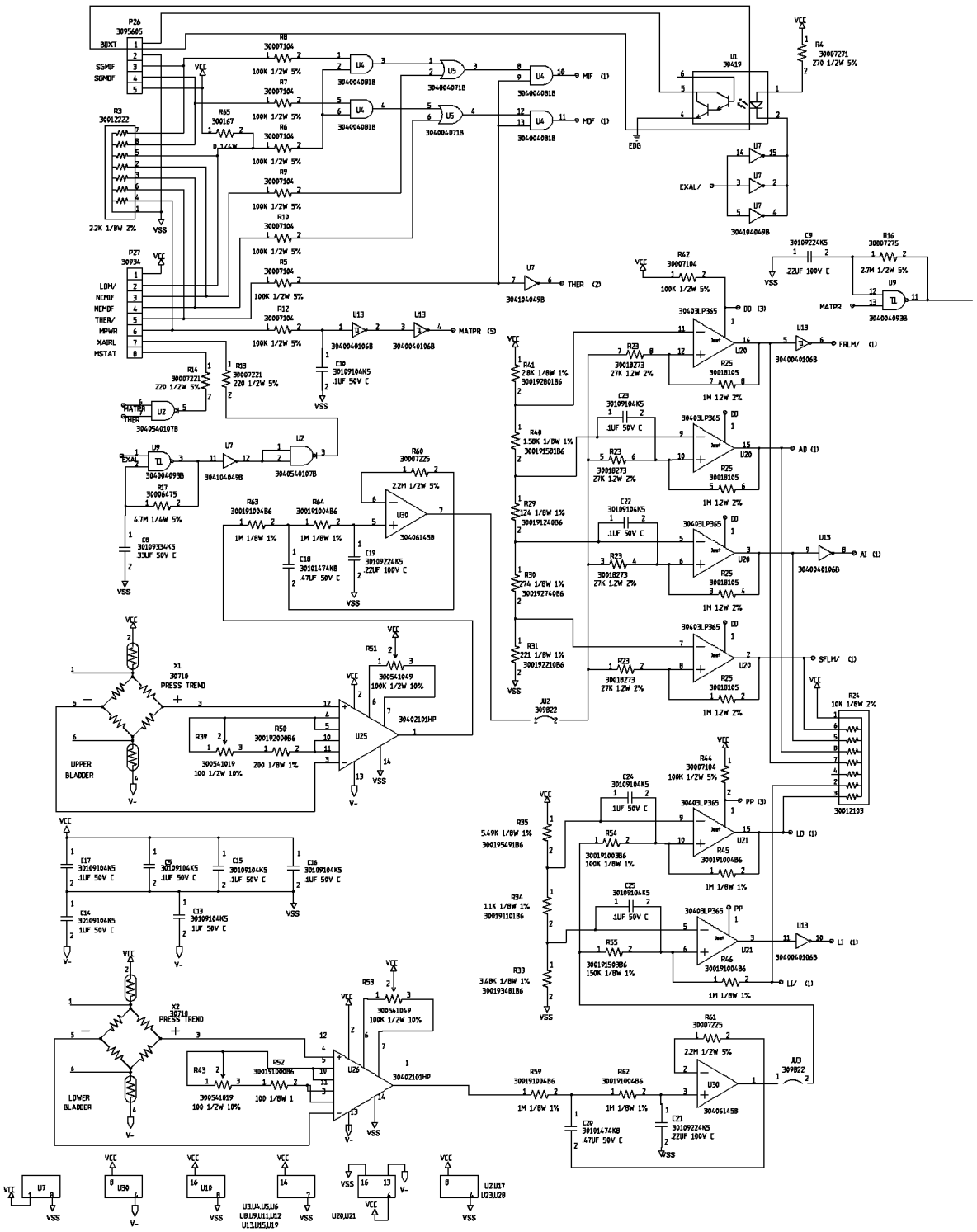


Figure 3-6. Air Board Assembly—P/N 45904 (Early Version, Sheet 2 of 2)

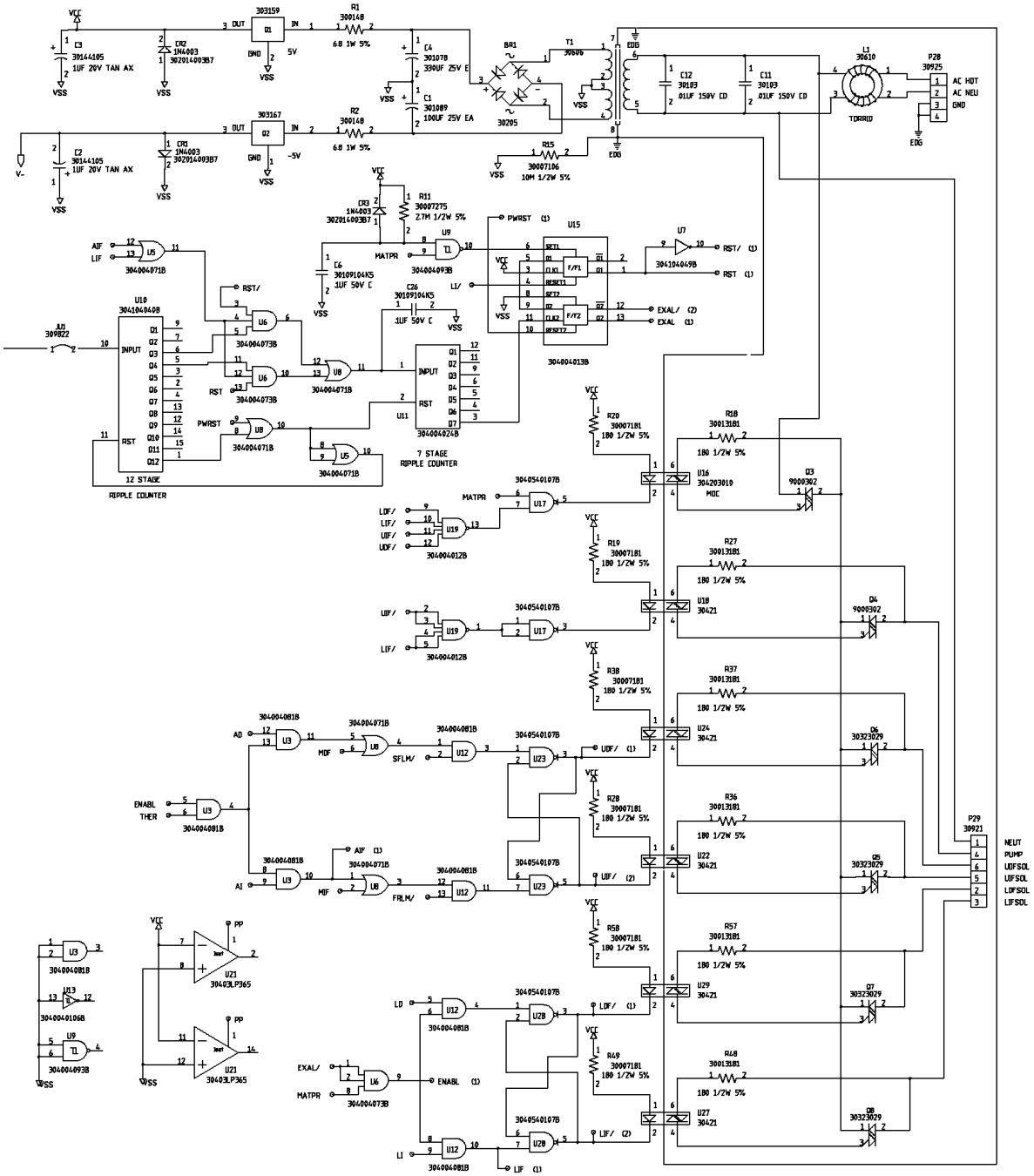


Figure 3-7. Air Board Assembly—P/N 46752 (Current Version, Sheet 1 of 2)

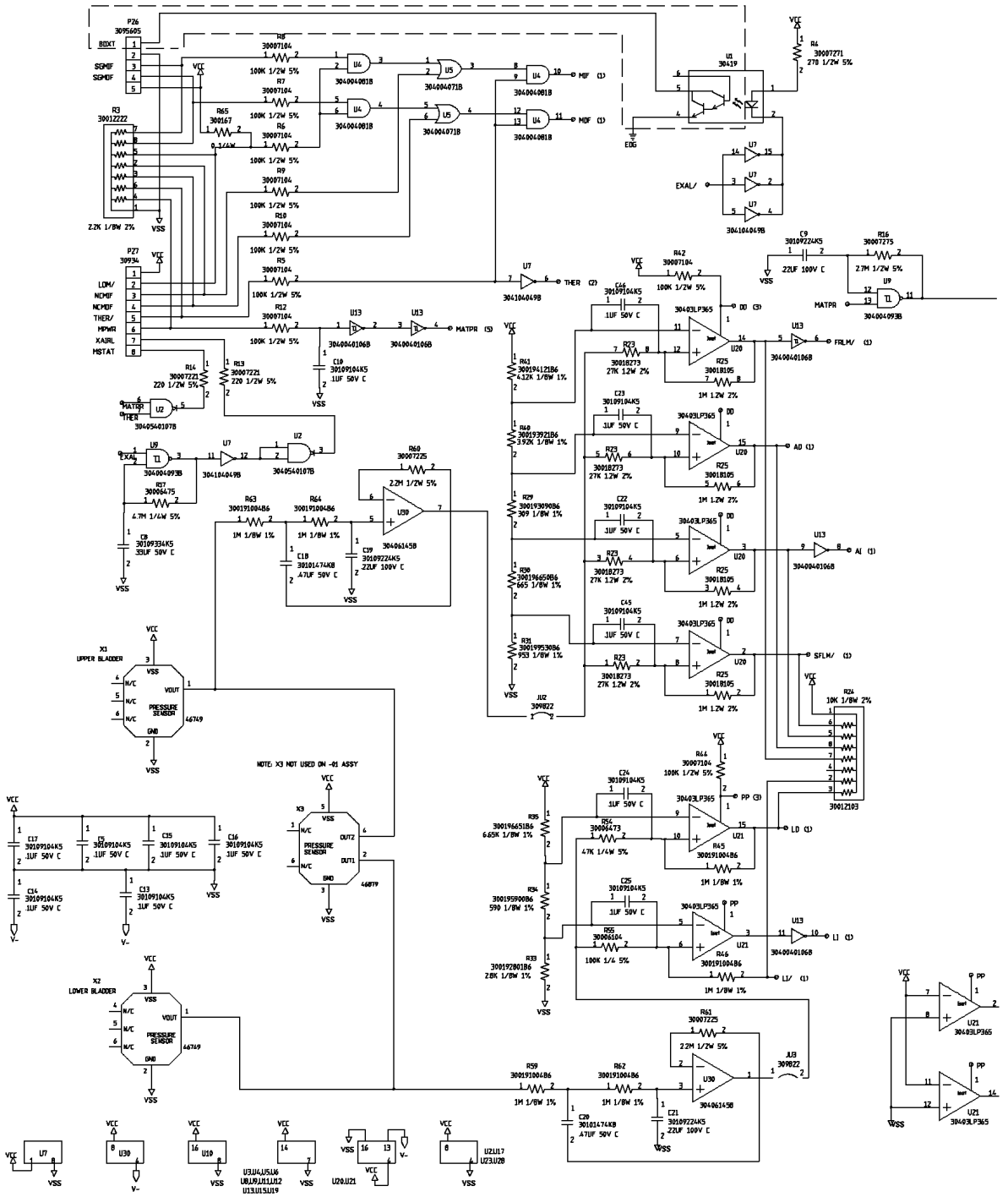


Figure 3-8. Air Board Assembly—P/N 46752 (Current Version, Sheet 2 of 2)

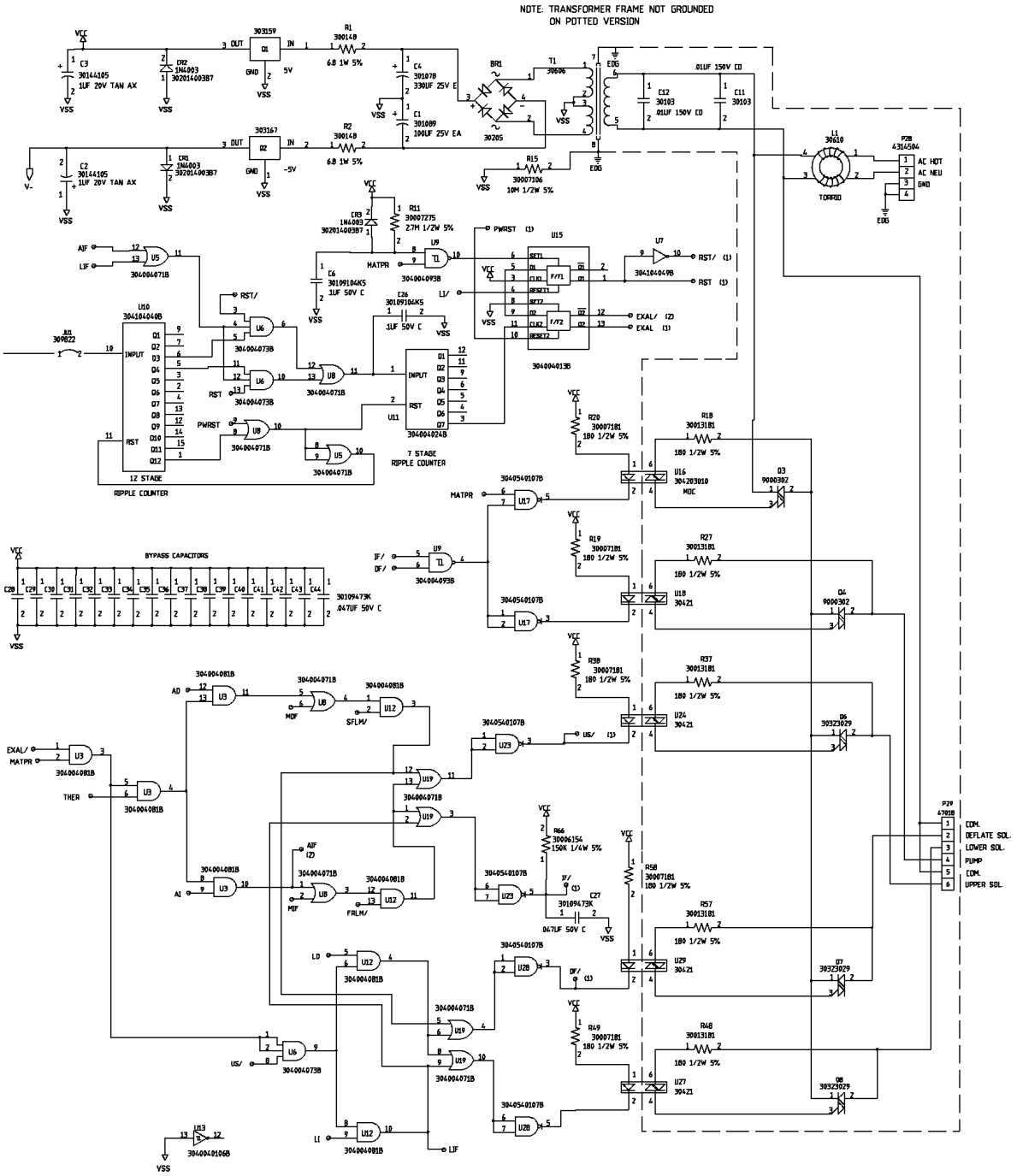


Figure 3-9. Air Board Assembly (VDE)—P/N 43519 (Early Version, Sheet 1 of 2)

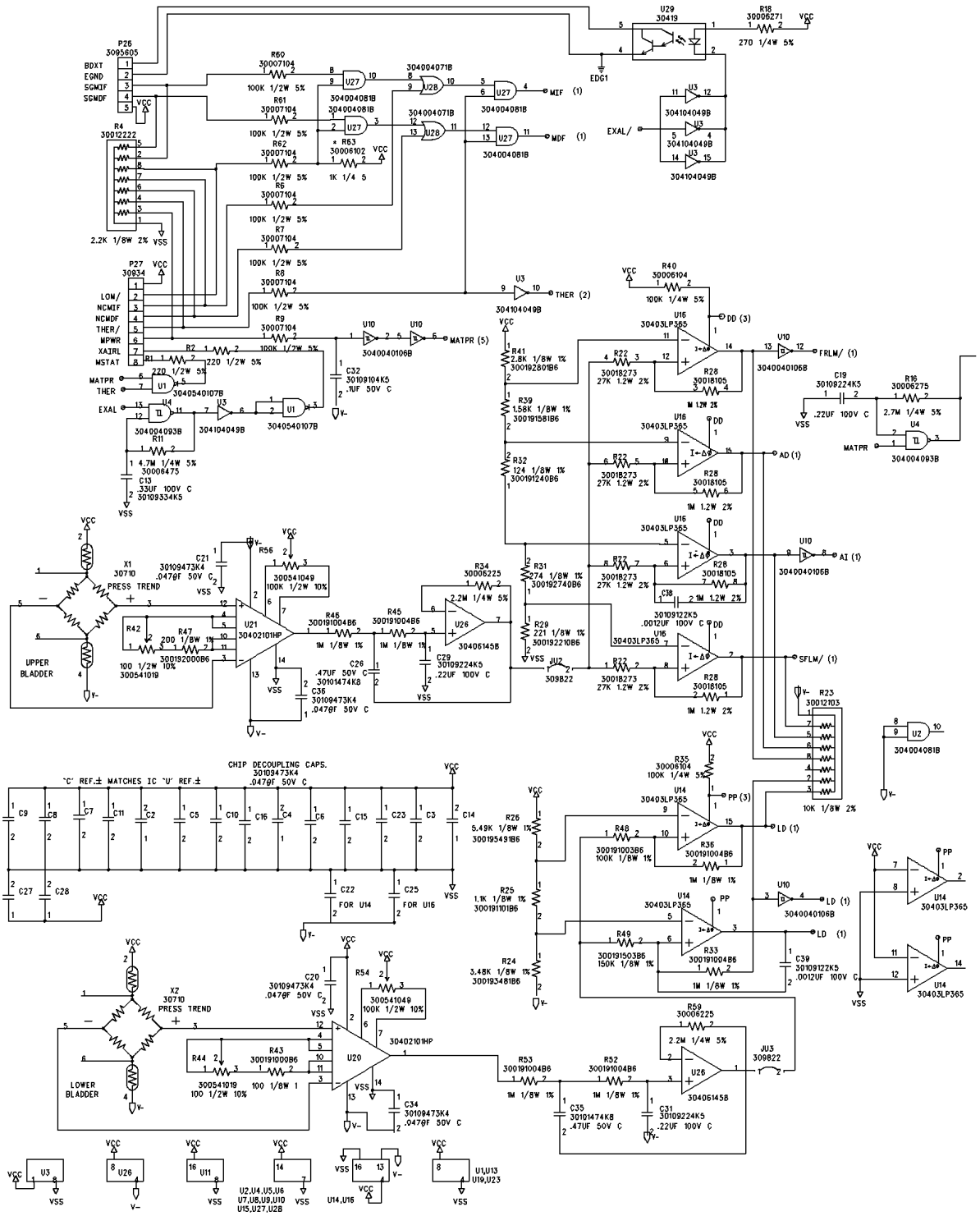


Figure 3-10. Air Board Assembly (VDE)—P/N 43519 (Early Version, Sheet 2 of 2)

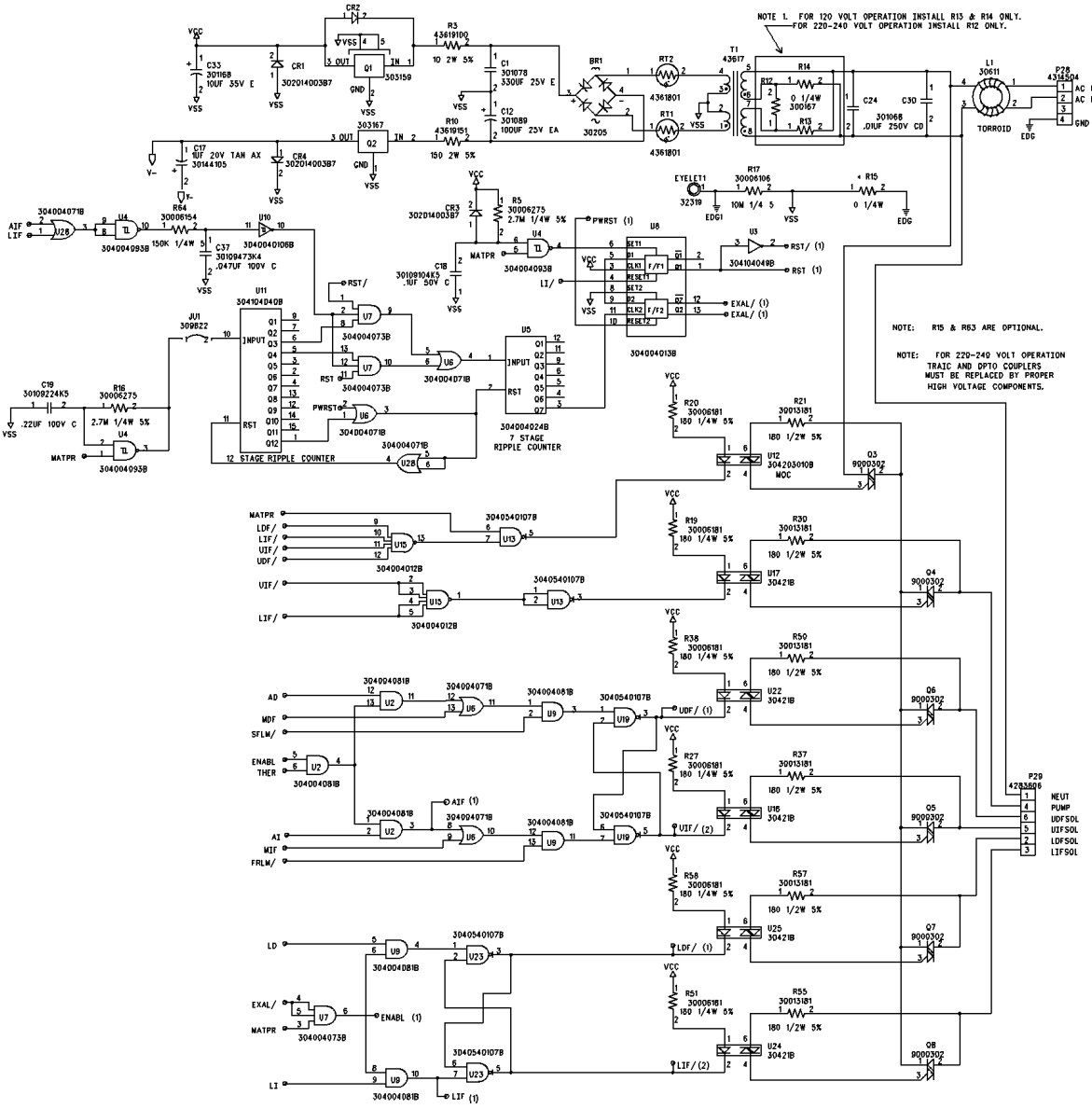


Figure 3-11. Air Board Assembly (VDE)—P/N 48606 (Current Version, Sheet 1 of 2)

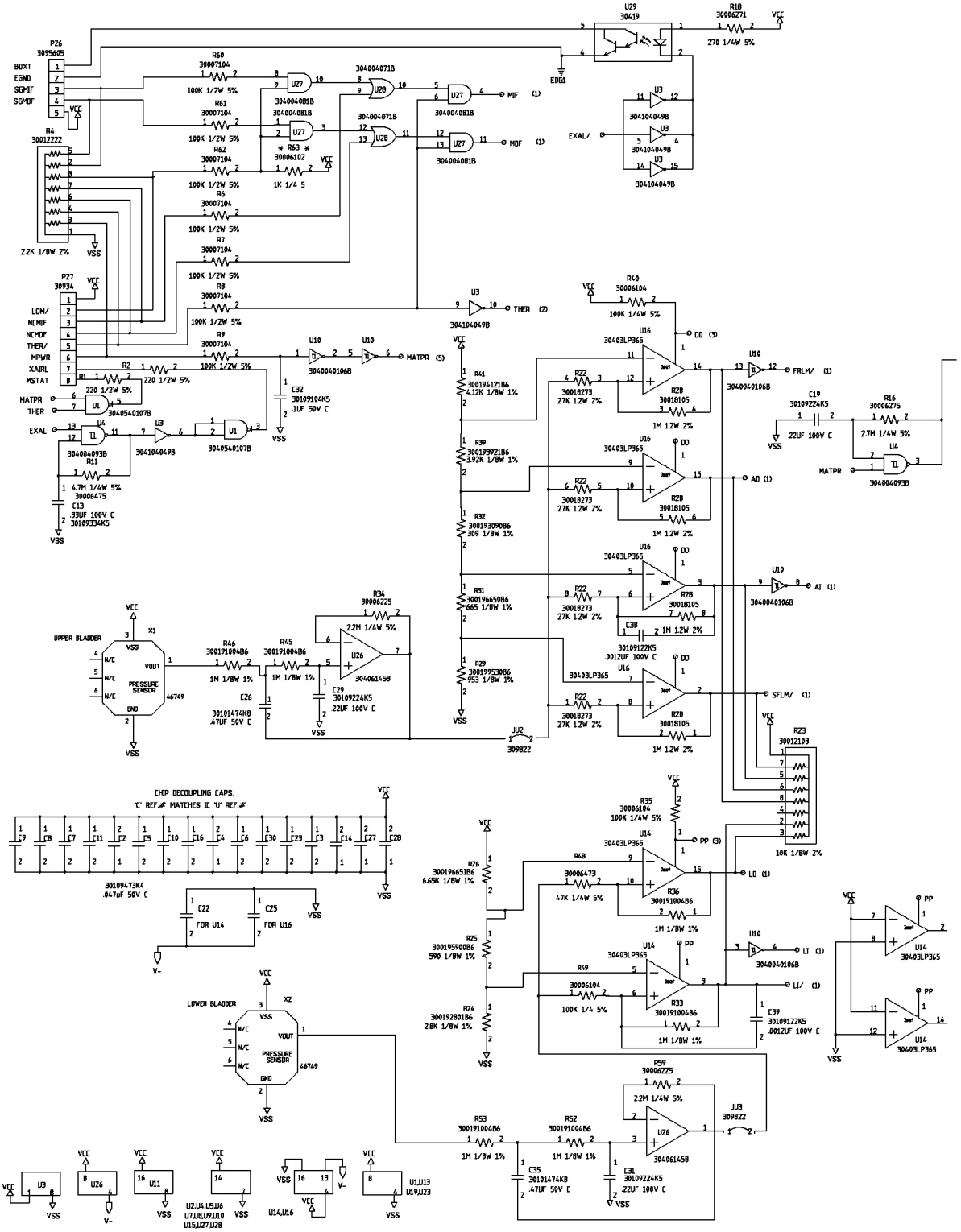
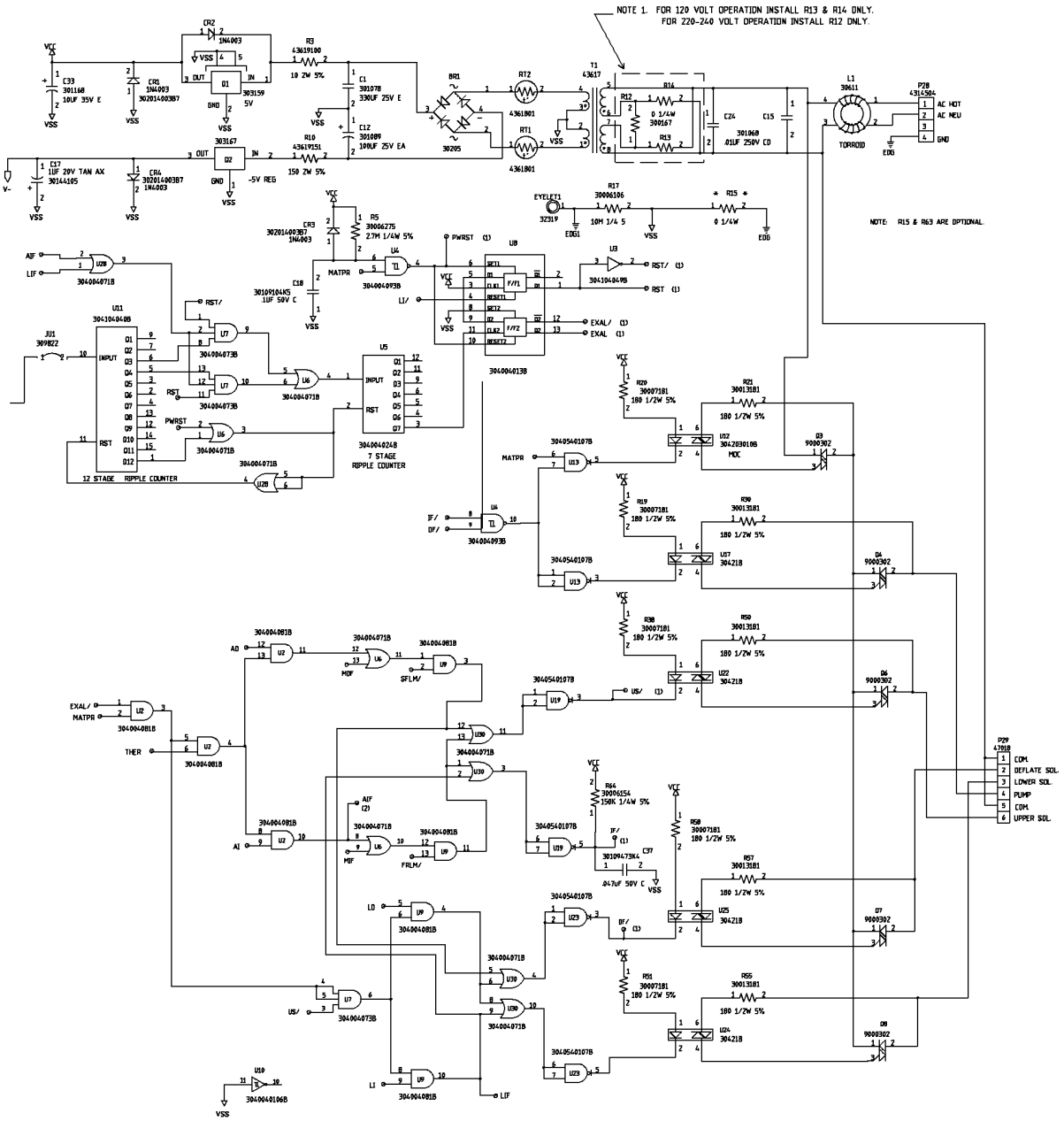


Figure 3-12. Air Board Assembly (VDE)—P/N 48606 (Current Version, Sheet 2 of 2)



3

P.C. Board Wiring Diagram—Main Control Board

Figure 3-13. Main Control Board—P/N 35831 (Early Version)

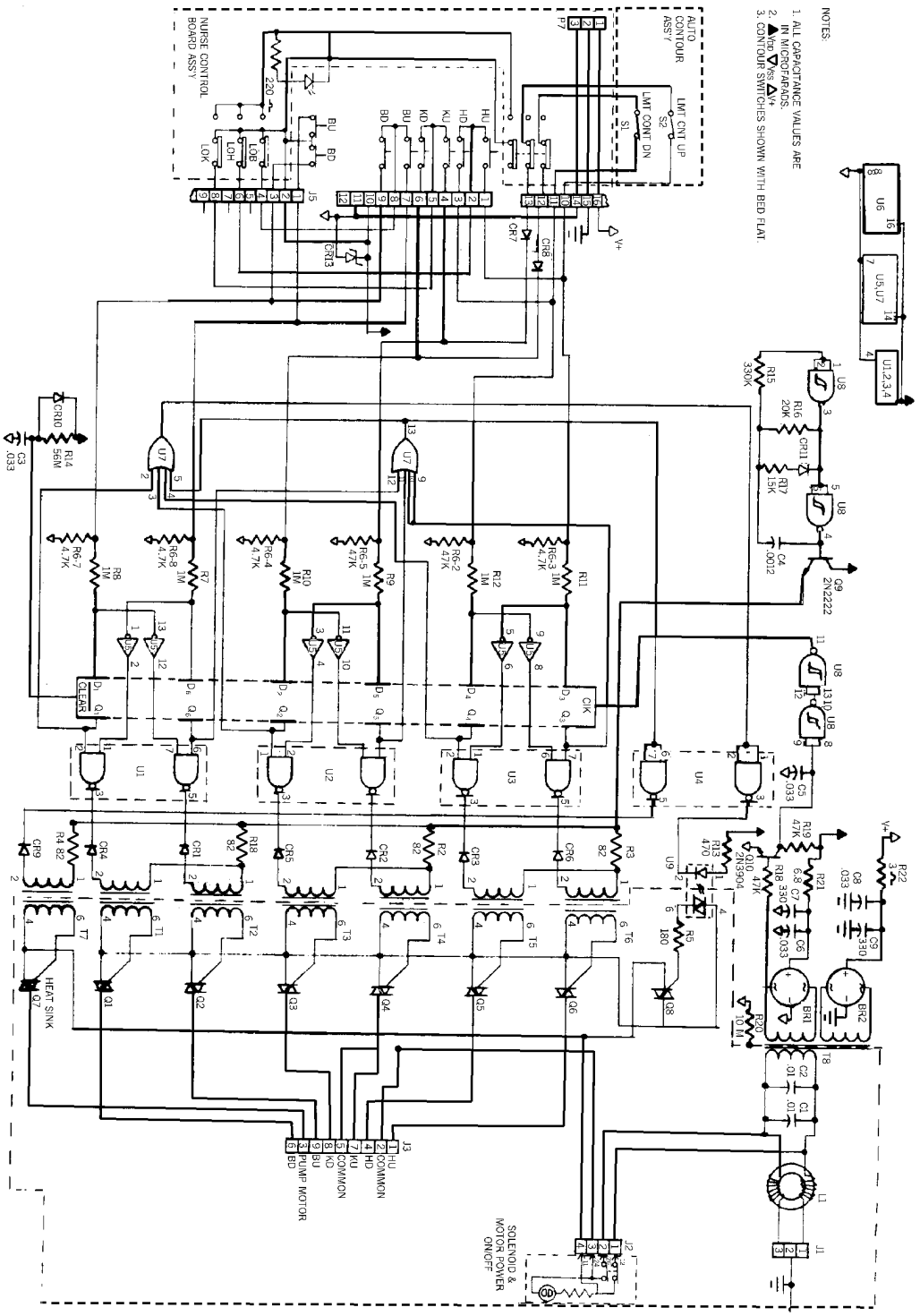


Figure 3-14. Main Control Board—P/N 36275 (Current Version)

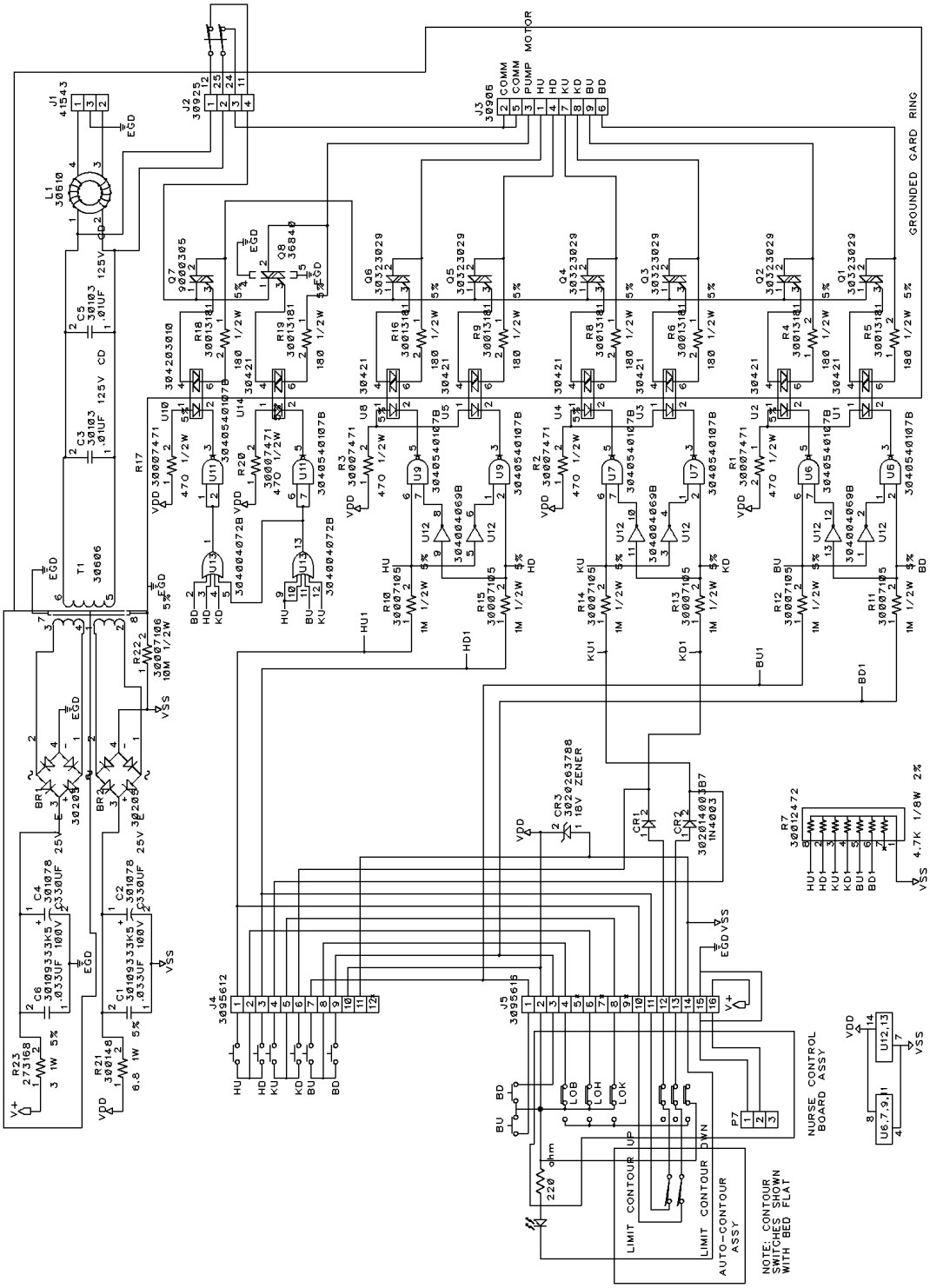


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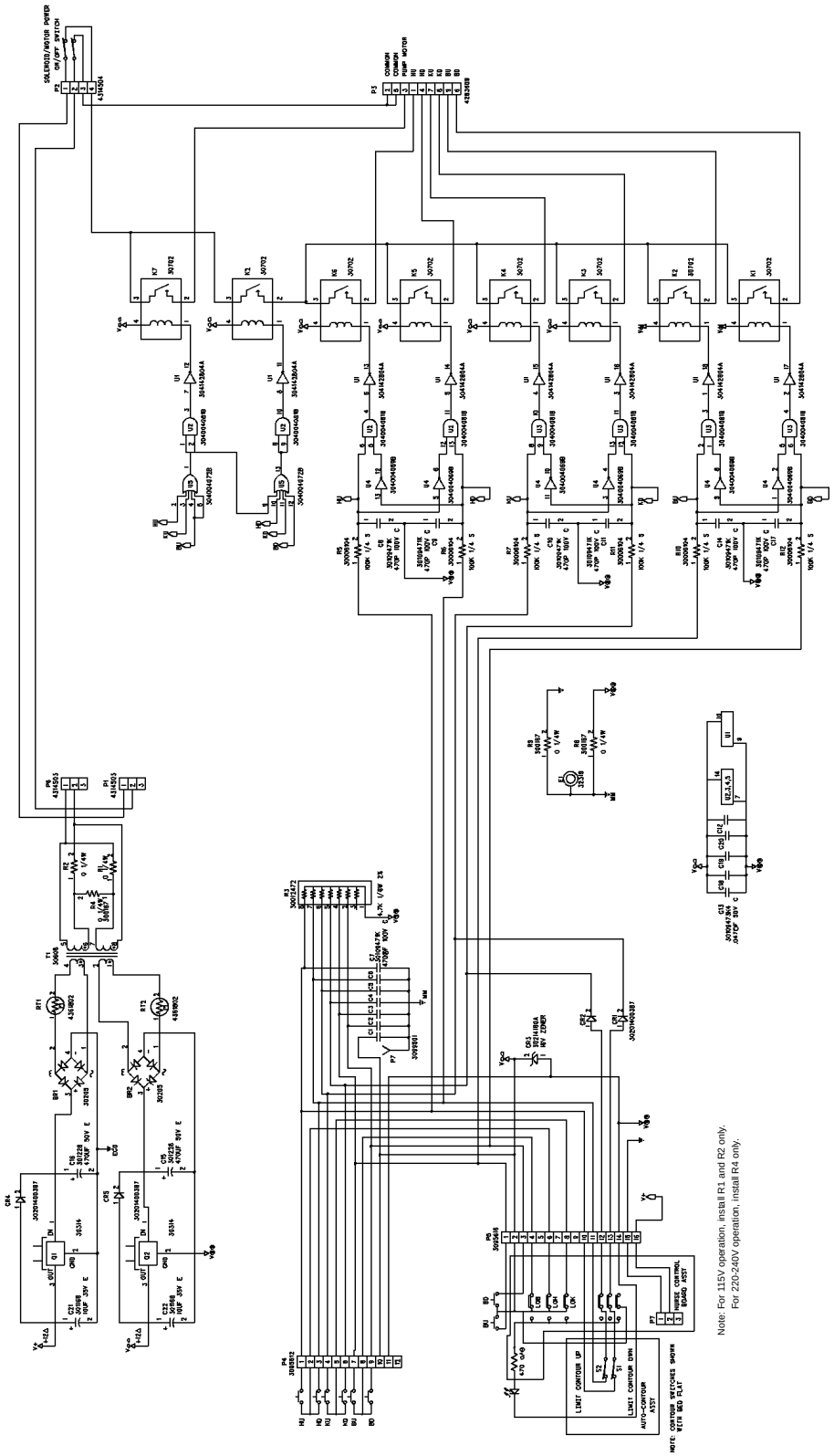
Figure 3-15. Main Control Board (VDE)—P/N 42009



P.C. Board Wiring Diagram—Junction Box

Figure 3-16. Junction Box—P/N 28664 (Early Version)

(Illustration not available)

Figure 3-17. Junction Box—P/N 38350 (Early Version)

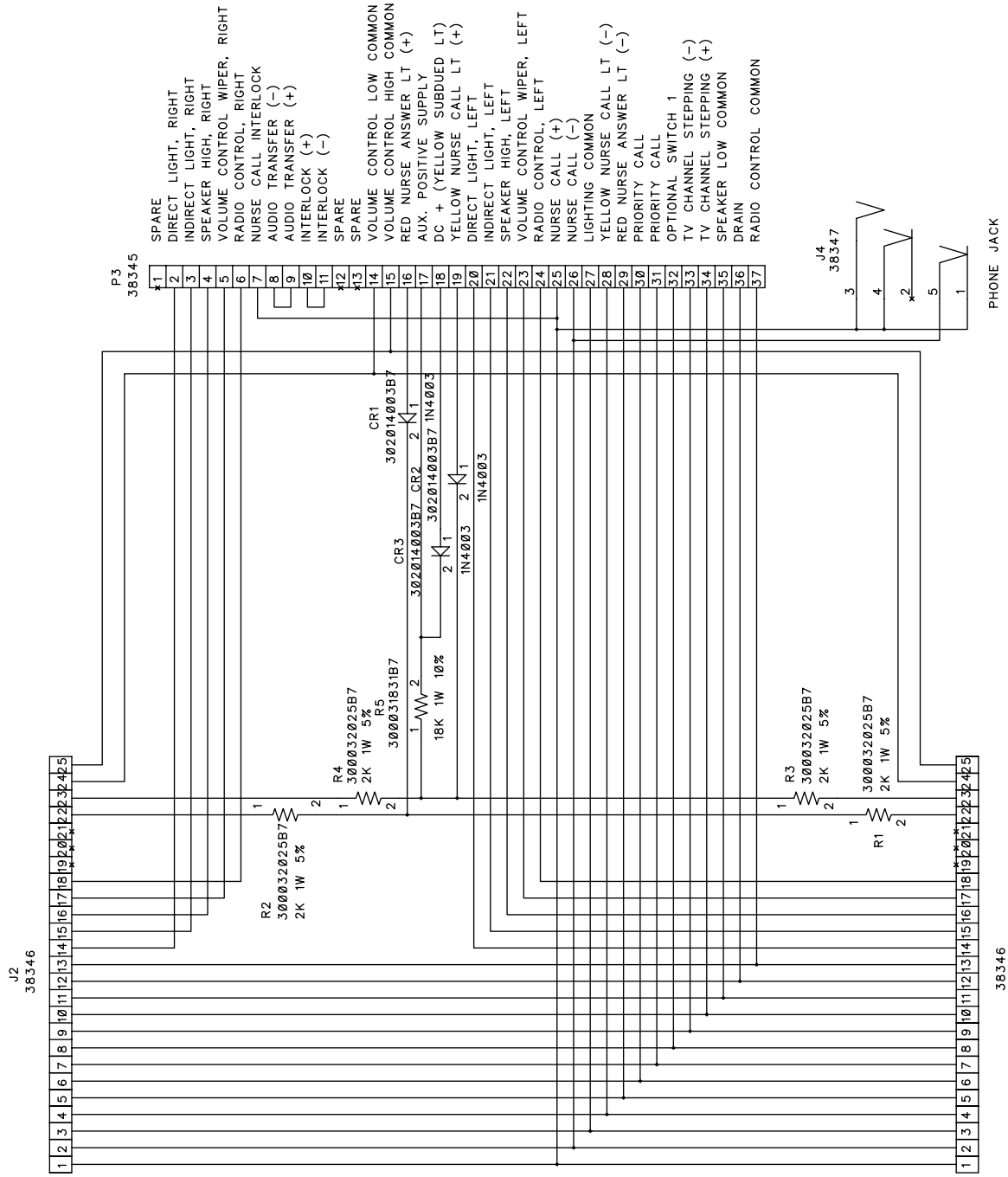
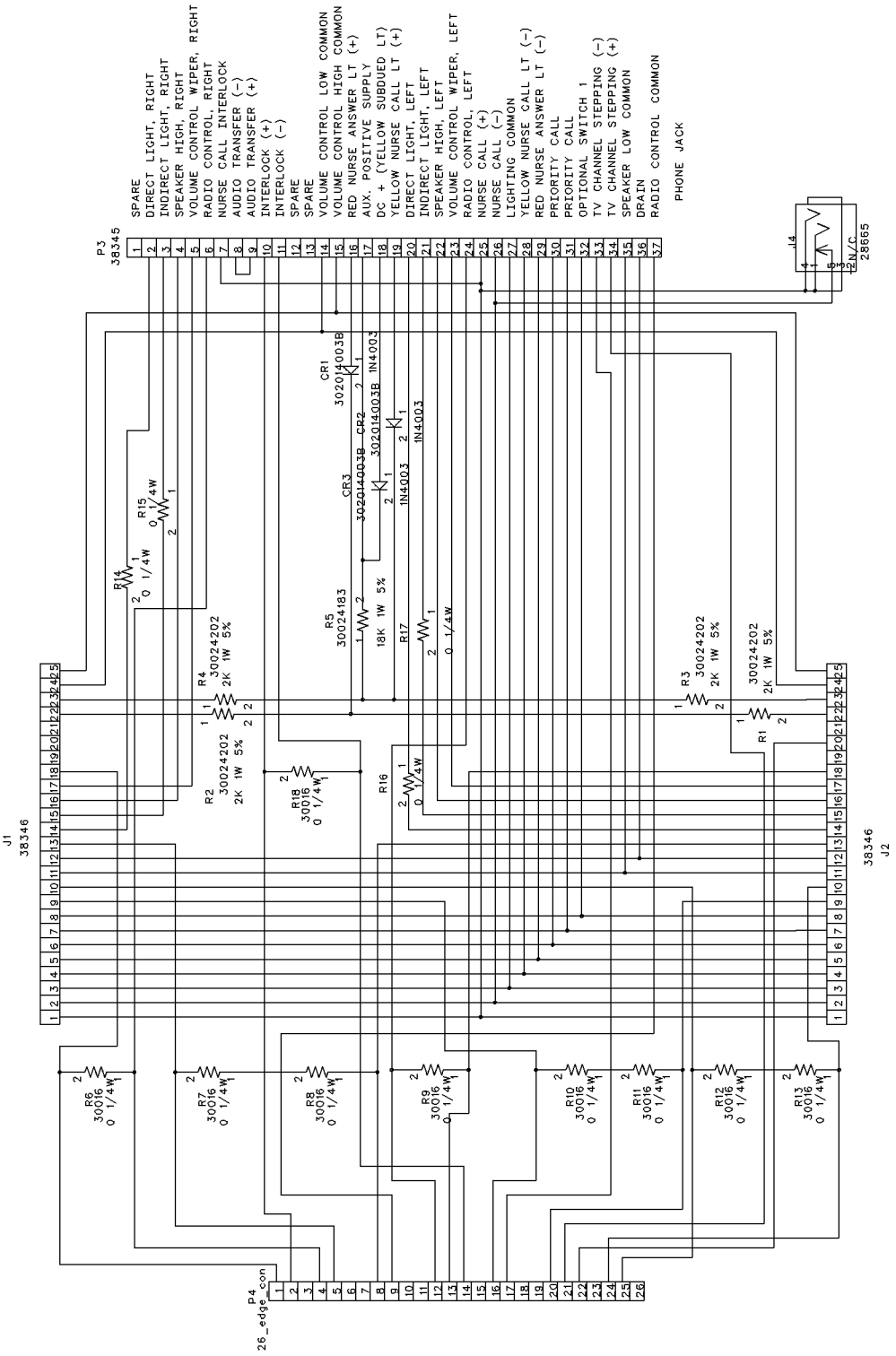
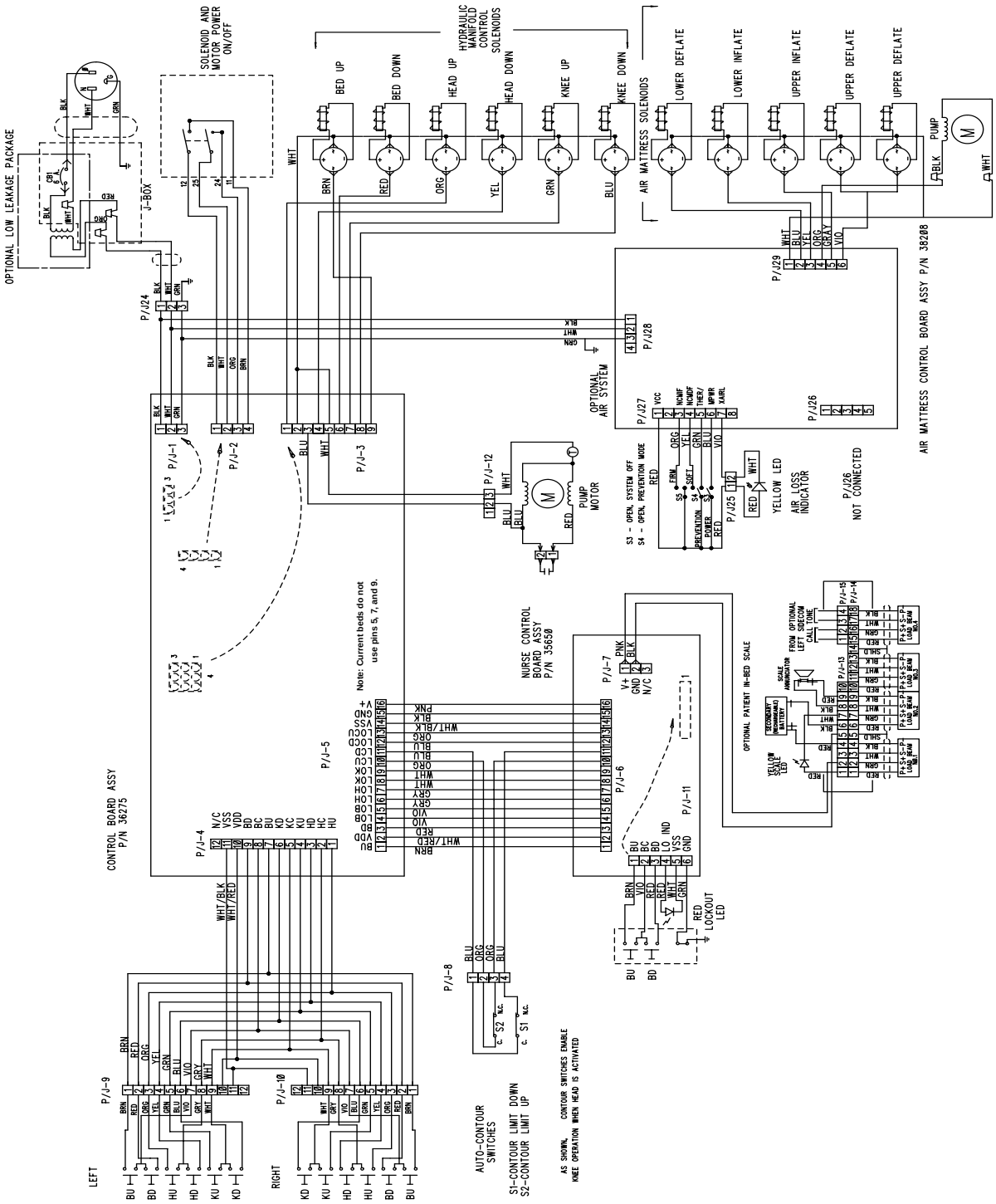


Figure 3-18. Junction Box—P/N 43853 (Current Version)



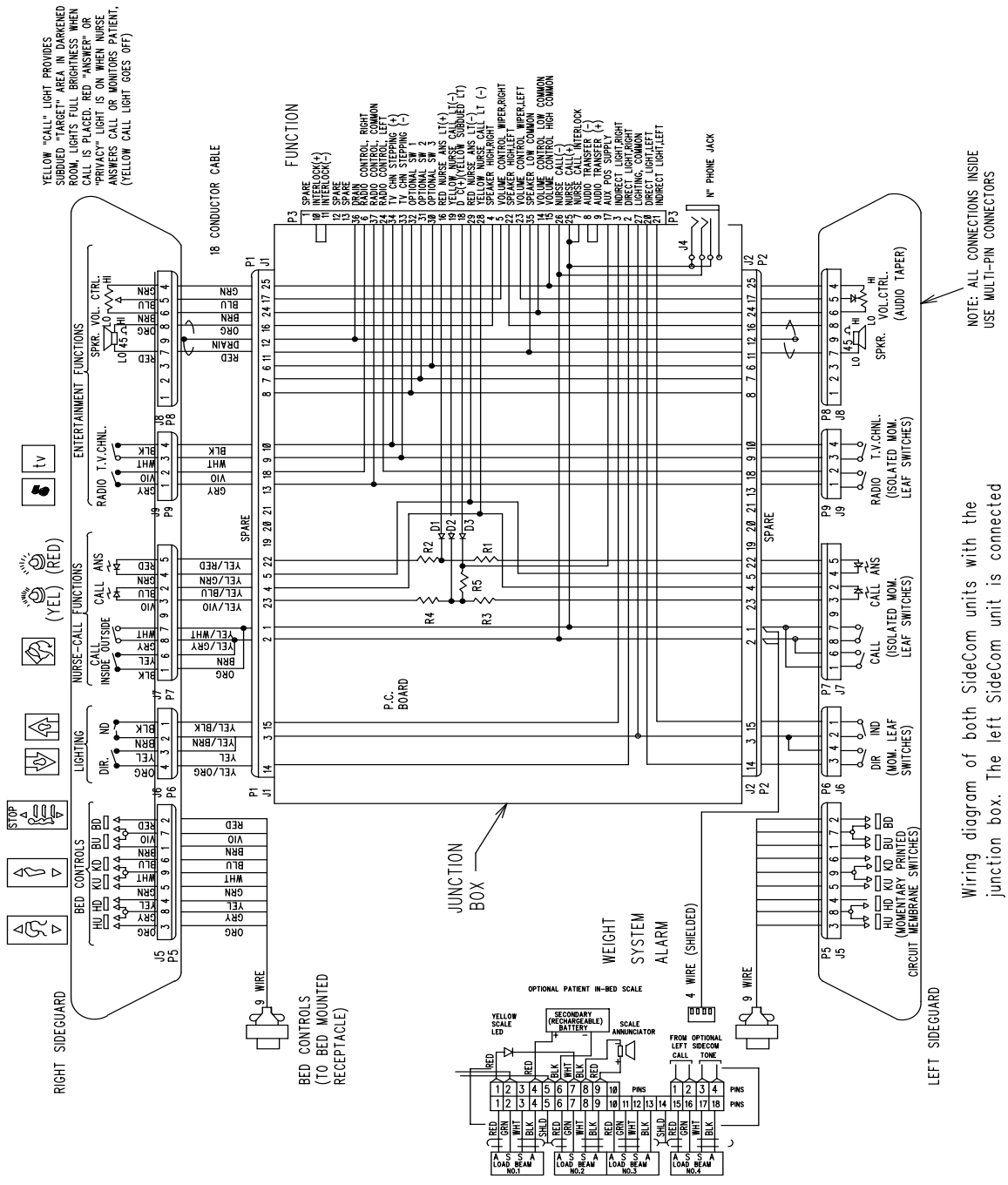
Wiring Diagram P/N 42760—Models 892/894/895/896

Figure 3-19. Wiring Diagram P/N 42760—Models 892/894/895/896



SideCom Communication System Wiring Diagram

Figure 3-20. SideCom Communication System Wiring Diagram



Hose Route Key and Function Chart

The Hose Function Chart Table 3-1 on page 3-30, when used along with the Key To Hose Route Table 3-2 on page 3-31, will enable you to locate the part number of any hydraulic hose in the Century CC Bed. It also serves as a logic chart for each valve assembly, the two pumps, and the reservoir.

For example, look at the Key To Hose Route table and find the route letters for the hilow circuit under electric pump. They read: A-A to B-B to E-E. Look in the Hose Function Chart table and find the two devices containing the letter A. They are the electric pump and the manifold assembly. Therefore, the first hose used in the hilow circuit is hose P/N SA1277, connecting the manifold assembly to the electric pump.

Now read the next letter set, B-B. Note that B-B is routed from the manifold to the selector valve, using hose P/N 35798. From there the route is E-E, from the selector valve to the single action hilow cylinder, hose P/N 35932 (early version) or P/N 45932 (current version).

If you want to know which hose completes the circuit back to the reservoir, simply trace the route backwards from the hilow cylinder to the valve containing the letter with a box around it. In this case it is the letter M listed under the manifold assembly. By checking the Key to Hose Route table you will find that the manifold dumps to the reservoir by the route of M-M using hose P/N 35801.

Similarly, if you want to know which hose feeds the manual or electric system, look for the letter with a circle around it. This indicates which hose feeds the pump from the reservoir.

Table 3-1. Key to Hose Route

Circuit	Hose Route	Circuit	Hose Route
Electric Pump		**Manual Pump**	
Hilow	A-A to B-B to E-E	Hilow	N-N to P-P to E-E
Knee	A-A to C-C to F-F	Knee	N-N to P-P to F-F
CPR—from knee cylinder	G-G to H-H	CPR—from knee cylinder	G-G to H-H
Head	A-A to D-D to J-J to K-K	Head	N-N to P-P to J-J to K-K
CPR—from head cylinder	L-L to H-H	CPR—from head cylinder	L-L to H-H

Circuit	Hose Route	Circuit	Hose Route
Dump To Reservoir		**Feed From Reservoir**	
Manual release valve	R-R to Q-Q	Manual pump	Q-Q
CPR	H-H	Electric pump	S-S
Manifold	M-M		

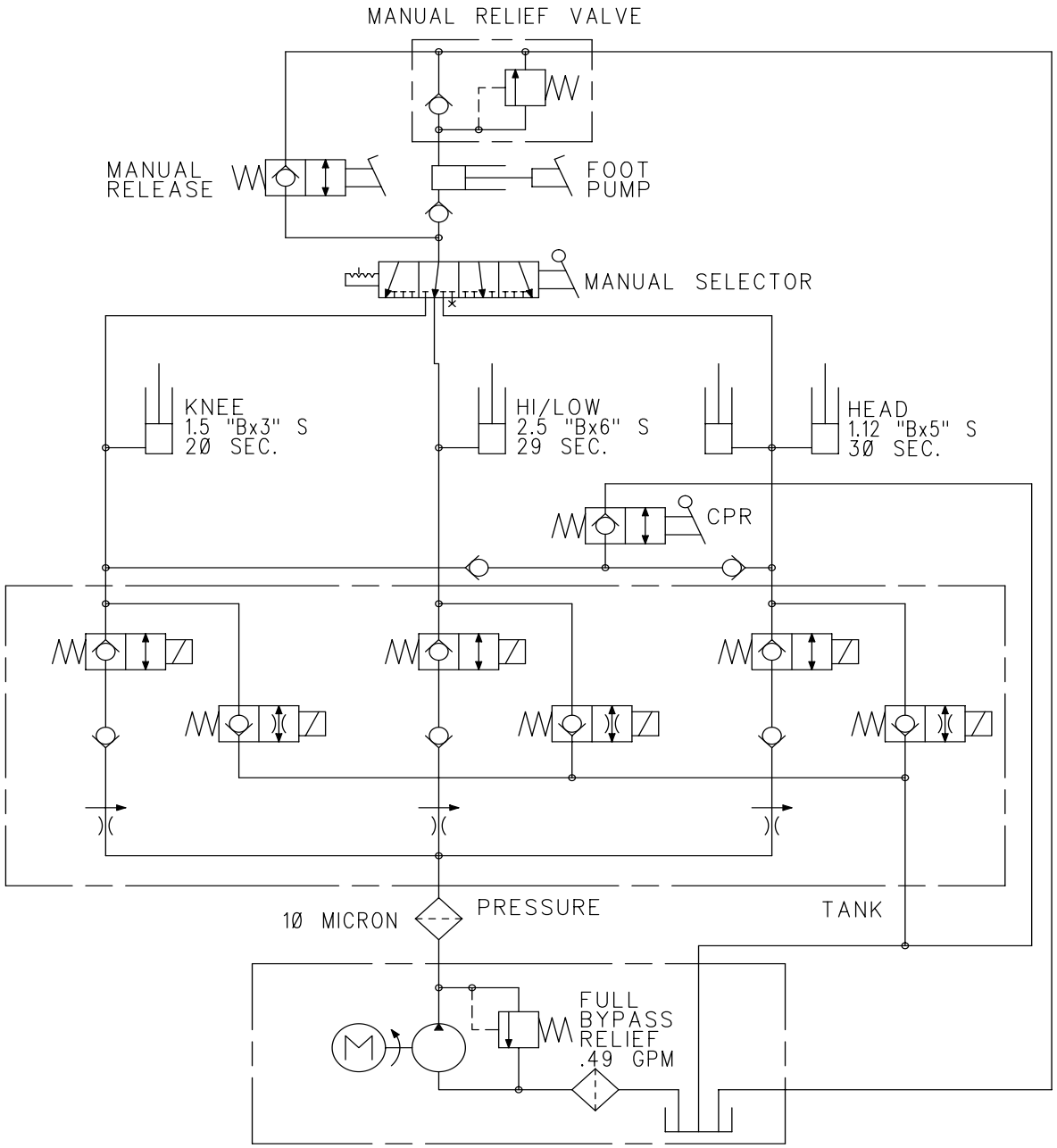
Table 3-2. Hose Function Chart

Hose Route	Hose Part Number	Hose Route	Hose Part Number
Electric Pump		**Manual Pump**	
A	SA1277	(Q)	35799 (early version) 42290 (current version)
(S)	39407 (early version)	N	36206
Manifold Assembly		[R]	35800
D	35797 (head)	**Manual Release**	
C	35797 (knee)	P	36205
A	SA1277 (pump)	N	36206
B	35798 (hilow)	[R]	35800
[M]	35801 (dump—early version) 35800 (dump—current version)	**Selector Valve**	
Hilow Cylinder		J	36725
E	35932 (early version) 45932 (current version)	C	35797 (knee)
Knee Cylinder		D	35797 (head)
G	36725	F	35797
F	35797	E	35932 (early version) 45932 (current version)
Right Head Cylinder		P	36205
K	36796	B	35798
Left Head Cylinder		L	36795
K	35726	**CPR Valve Assembly**	
Bulkhead Fitting		G	36725

Hose Route	Hose Part Number	Hose Route	Hose Part Number
J	36725	L	35795
K	36726	H	36723 (early version) 42291 (current version)
K	35796	**Reservoir Dump**	
—	—	Q	35799 (early version) 42290 (current version)
—	—	M	35801 (early version) 35800 (current version)
—	—	H	36723 (early version) 42291 (current version)
—	—	S	39407 (early version)

Hydraulic Schematic

Figure 3-21. Hydraulic Schematic



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Chapter 4
Removal, Replacement, and Adjustment Procedures

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4

NOTES:

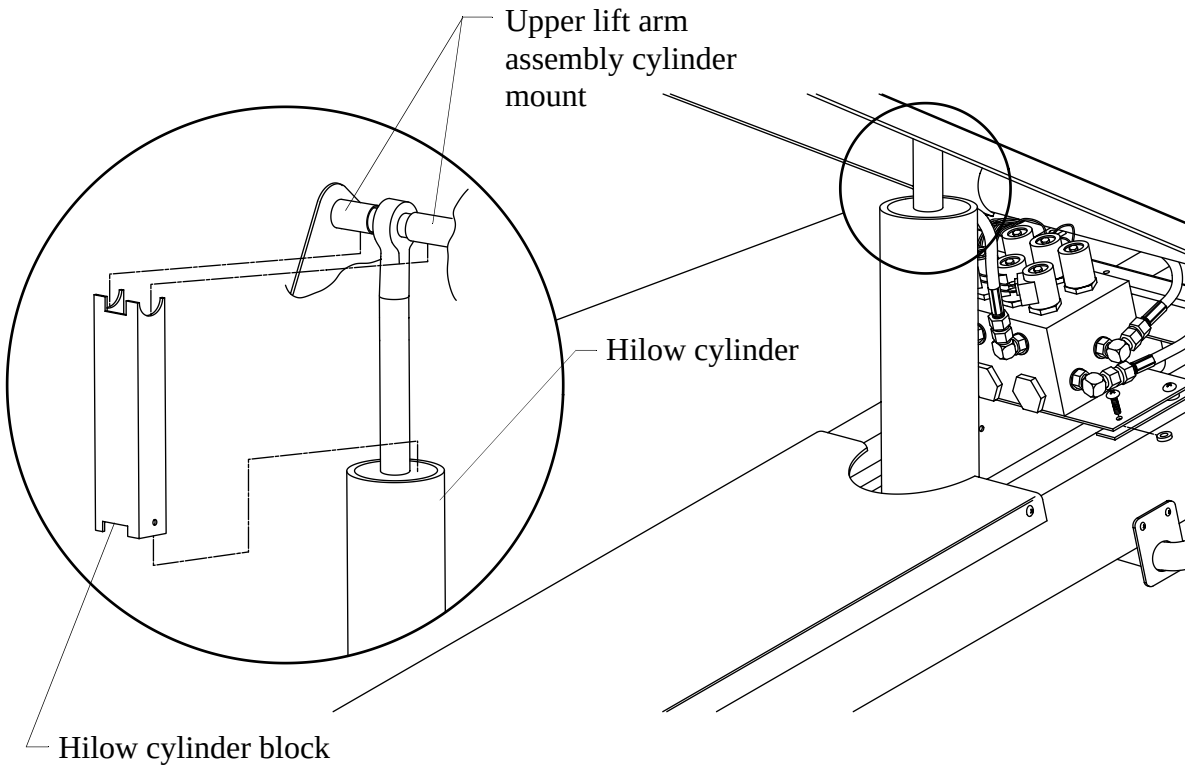
4.1 Hilow Cylinder Block

Tools required: Hilow cylinder block P/N (87V287S)

Removal

1. Using the hilow feature, raise the bed until the load has been removed from the hilow cylinder block (see figure 4-1 on page 4-7).
2. Remove the hilow cylinder block.
3. Using the hilow feature, lower the bed sleep surface as needed.

Figure 4-1. Hilow Cylinder Block—(P/N 87V287S)



Replacement

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

1. Using the hilow feature, raise the bed to the maximum high position.
2. Place the hilow cylinder block, 87V287S, on top of the cylinder body (see figure 4-1 on page 4-7).
3. Ensure the slots of the hilow cylinder block are aligned with the cylinder mount in the upper lift arm assembly.
4. Using the hilow feature, lower the bed until the cylinder mount rests in the slots of the hilow cylinder block.
5. Ensure the hilow cylinder block has remained in the correct position.

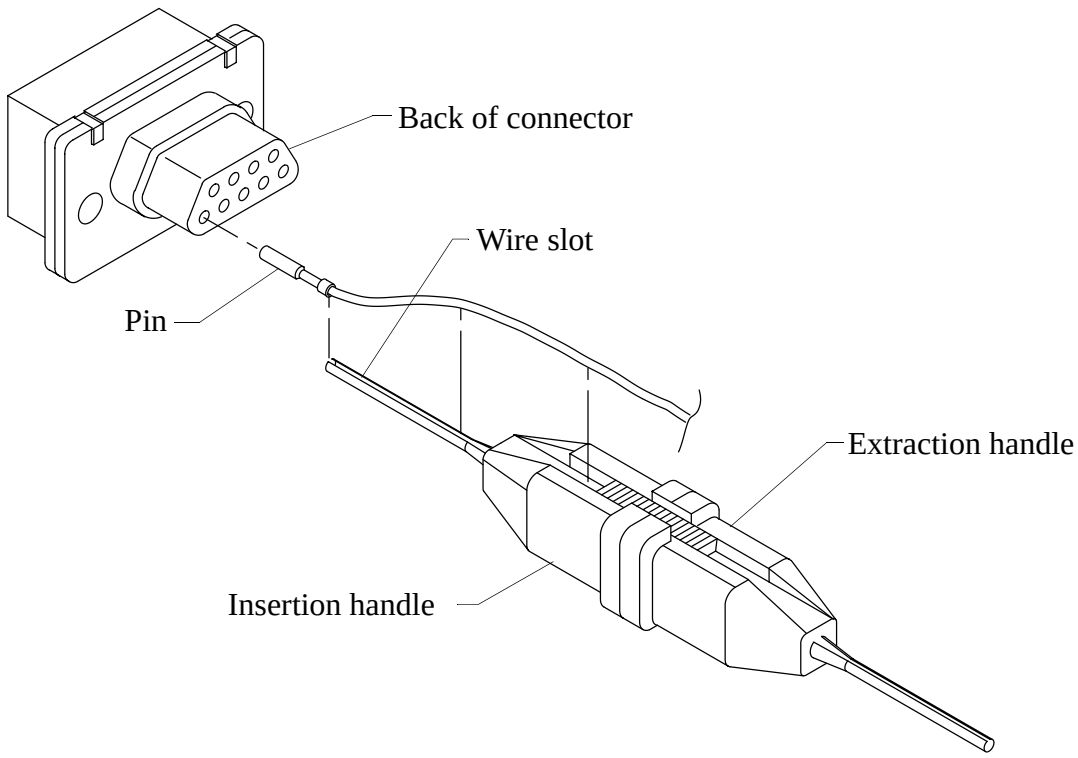
4.2 Terminal and Pin

Most terminals and pins on the Century CC Bed can be removed from their connectors with the use of a small screwdriver or a pointed tool that any maintenance shop will have in their regular inventory of tools. Some, however, take a special extraction tool that can be purchased through Hill-Rom. The two special tools needed for the Century CC Bed are listed below with the part numbers of the pins they will extract.

These tools are designed for the Type XVII, size 22 and 20 contact used in AMPLIMITE High Density (HD) Connectors. Each tool handle consists of two color-coded halves. The white half features a metal extraction tip, and the other half features a metal insertion tip (see figure 4-2 on page 4-9).

Tools required: Extraction Tool (P/N SA3684—to extract pin P/N 28883)
Extraction Tool (P/N 428356—to extract pins P/N 22153 and 22154)

Figure 4-2. Pin Extraction



Removal

1. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

2. Place the wire that has the faulty pin along the wire slot of the extraction tool. Hold the wire in this position with your thumb (see figure 4-2 on page 4-9).

3. While applying light pressure on the wire, slide your thumb over the wire from the center of the tool to the tip of the tool. The tool tip will spread and allow the wire to enter the tip.

4. Slide the tool along the wire until it touches the pin in the connector.

5. Holding the wire against the tool handle, pull back gently to extract the pin.

4.3 Pipe Fitting

Replacement

All new production fittings and replacement fittings use a neoprene o-ring seal or conical seal with vibra-seal already applied to the male fitting. Be sure to use Hill-Rom approved replacement parts. Do not use Teflon tape or teflon pipe dope on the fittings. If the conical fittings are removed, replace the male fitting which has vibra-seal. Carefully clean the female fitting to prevent the vibra-seal material from contaminating the hydraulic system.

Some older Century CC Beds used a copper conical seal on the hose and valve fittings. If you replace these fittings with an o-ring type fitting, be sure to replace both sides of the fitting with the o-ring type fitting.

Before you remove an elbow fitting, make a diagram or a good mental note of the direction and alignment of the elbow. If care is not taken to maintain the original alignment of the elbow fitting, the position of the connecting hose will be altered. This can cause interference with bed movement and/or bed scales.

4.4 Hydraulic System

Hydraulic Oil

If enough oil is spilled to require oil replacement, use only hydraulic oil P/N 36199S supplied by Hill-Rom. Failure to do so could void the warranty if damage occurs as a result of using the wrong replacement oils.

Purging the Hydraulic System

1. Check the reservoir for proper oil level.
2. Check for excessive air in the system by pumping the up pedal. If the pedal bottoms out or feels extremely spongy, there is excessive air in the system.
3. To purge the air from the hydraulic system:
   a. Put the bed in the low position.
   b. Move the manual selector valve to the HI-LO position.
   c. Depress the hydraulic release pedal and hold. Pump the up pedal to remove air from the hydraulic lines.
   d. Release the release pedal.
   e. Check for excessive air in the system by pumping the up pedal. The up pedal should feel much stiffer, and the system should be ready for normal operation.

4.5 Hose Connections

Removal

1. Remove any cover that is in your way.
2. If the upper bed frame is not in the low position, install the hilow cylinder block to keep the frame from coming down (refer to procedure 4.1).
3. Make sure there is no hydraulic pressure on the hose you are about to loosen. For example: If you are removing the hose that connects the manual selector valve to the knee cylinder, make sure the knee section is completely down.
4. Prepare for some hydraulic oil leakage by placing rags under the hose fittings.
5. Disconnect the hose. Always hold the nut that is farthest from the threaded fitting with a wrench while loosening the nut that is closest to the fitting.

Replacement

1. Connect and torque the hose fittings as follows (refer to procedure 4.3):
   - Always hold the nut that is farthest from the threaded fitting with a wrench while tightening the nut that is closest to the fitting.
   - For 1/8" and 1/4" hoses, torque the nuts to 90 in-lbs (10.2 N•m).
   - For 3/8" hoses, torque the nuts to 200 in-lbs (22.6 N•m).
2. Purge the hydraulic system of air (refer to procedure 4.4), and check for leaks.
3. Replace all covers that were removed.

4.6 Hydraulic Pump (Motor Driven—Early Version)

Tools required: Phillips head screwdriver
1/2", 9/16", 5/8", and two 3/4" wrenches
Hilow cylinder block (P/N 87V287S)

Removal

1. Using the hilow feature, raise the bed to the high position.
2. Unplug the unit from its power source.

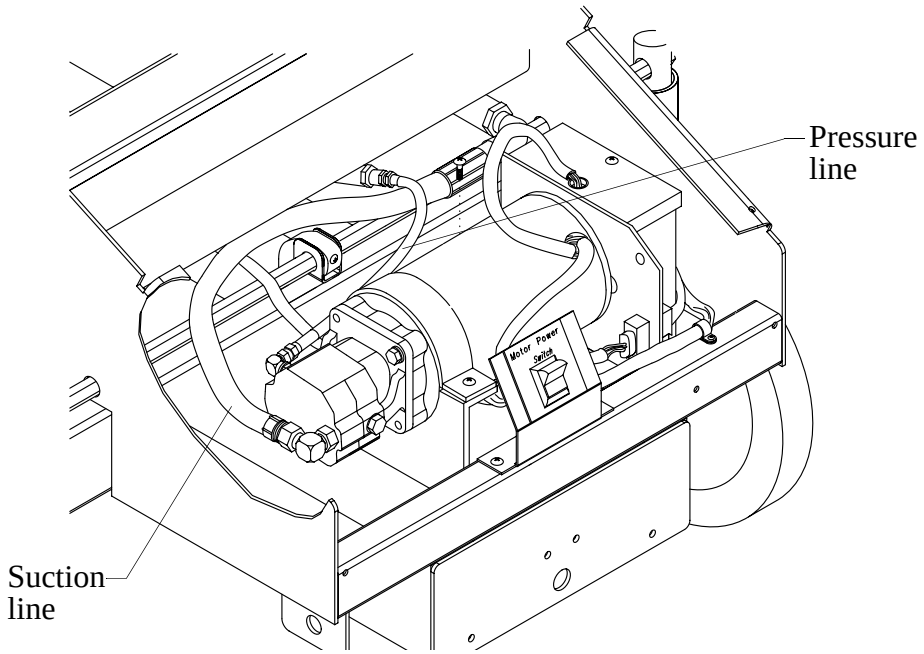
WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

3. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

4. Remove the motor cover and two side covers at the foot end of the bed.
5. Loosen the pressure and suction lines attached to the pump (refer to procedure 4.5) (see figure 4-3 on page 4-15).
6. Remove the two bolts holding the pump to the motor.
7. Disconnect the hydraulic hoses previously loosened, and tie the ends higher than the reservoir to prevent excessive hydraulic oil leakage.

Figure 4-3. Hydraulic Pump (Early Version)



Replacement

1. Attach the replacement pump to the motor using two bolts. Tighten the bolts.
2. Connect and torque the hydraulic hoses (refer to procedure 4.5).
3. Remove the hilow cylinder block from the hilow cylinder (refer to procedure 4.1).
4. Purge the air from the hydraulic system (refer to procedure 4.4).
5. Check for proper operation of the bed, and install the covers.

4.7 Hydraulic Pump (Motor Driven—Current Version)

Tools required: Phillips head screwdriver
7/16", 1/2", 9/16", 5/8", and two 3/4" wrenches
Hilow cylinder block (P/N 87V287S)

Removal

1. Using the hilow feature, raise the bed to the high position.
2. Unplug the unit from its power source.

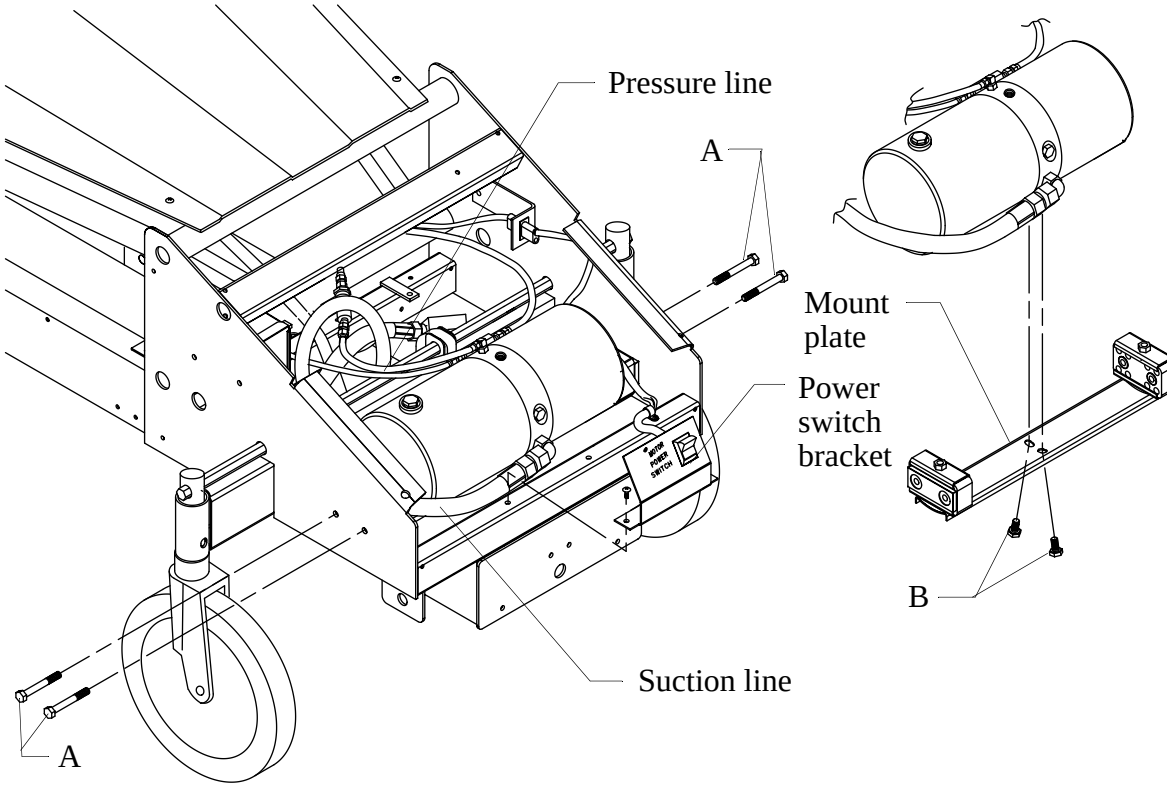
WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

3. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

4. Remove the motor cover and two side covers at the foot end of the bed.
5. Remove the motor power switch bracket.
6. Loosen the pressure and suction lines attached to the pump (refer to procedure 4.5) (see figure 4-4 on page 4-17).
7. Remove the four bolts (A) holding the motor/pump unit in the bed.
8. Unplug the electrical connectors from the motor.
9. Disconnect the hydraulic hoses previously loosened and tie the ends up to prevent excessive hydraulic oil leakage.
10. Remove the two bolts (B) that secure the mount plate to the motor/pump.

Figure 4-4. Hydraulic Pump (Current version)



Replacement

1. Install the replacement motor/pump to the mount plate with two bolts (B). Tighten the bolts.
2. Install the motor/pump unit in the bed with the four bolts (A). Tighten the four bolts.
3. Connect and torque the hydraulic hoses (refer to procedure 4.5).
4. Remove the hilow cylinder block from the hilow cylinder.
5. Purge the air from the hydraulic system (refer to procedure 4.4).
6. Check for proper operation of the bed, and install the covers.

4.8 Hydraulic Oil (Early Version)

Tools required: Phillips head screwdriver
9/16" wrench
Hilow cylinder block (P/N 87V287S)
Hydraulic oil (P/N 36199S)

Replacement

1. Raise the bed to the high position. Raise both the knee and head sections to their high positions.

2. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

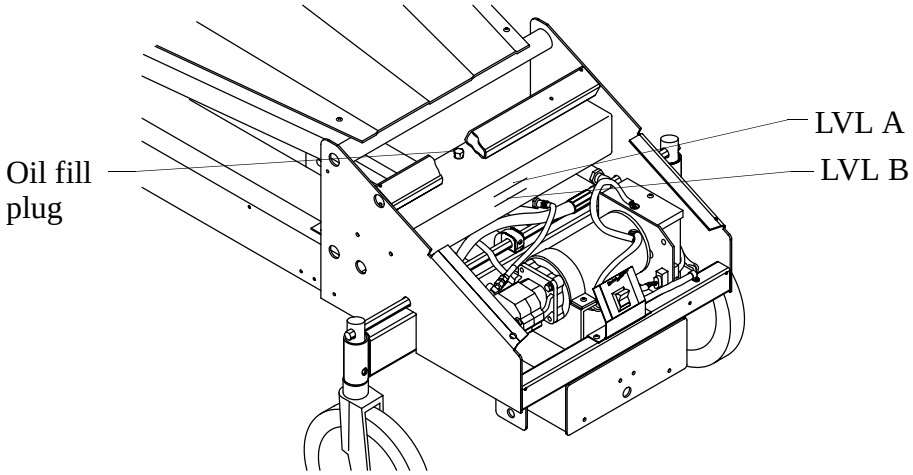
3. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

4. Remove the motor cover and two side covers at the foot end of the bed.

5. Remove the oil fill plug from the reservoir (see figure 4-5 on page 4-19).

Figure 4-5. Hydraulic Oil (Early Version)



6. Fill the reservoir until the oil level is even with to 1/4" above the LVL B mark on the reservoir (refer to procedure 4.4).

7. Install the oil fill plug in the reservoir. Tighten the oil fill plug.

8. Install all the covers that were removed.

4.9 Hydraulic Oil (Current Version)

Tools required: Phillips head screwdriver
11/16" wrench
Hilow cylinder block (P/N 87V287S)
Hydraulic oil (P/N 36199S)

Replacement

1. Lower the bed to the low position. Lower both the knee and head sections to their low (flat) positions.

2. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

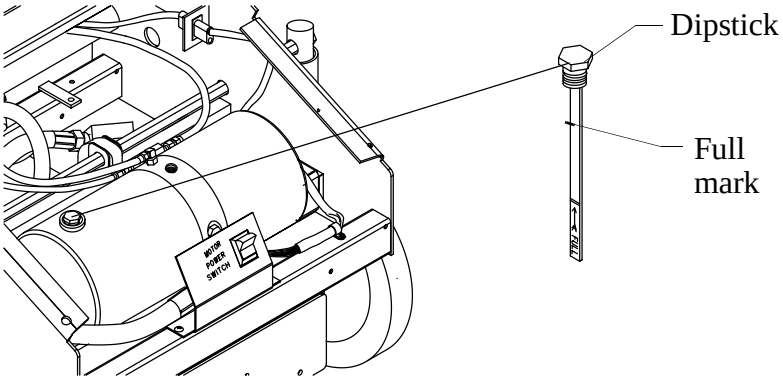
3. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

4. Remove the motor cover and two side covers at the foot end of the bed.

5. Remove the dipstick from the reservoir (see figure 4-6 on page 4-20).

Figure 4-6. Hydraulic Oil (Current Version)



6. Fill the reservoir with hydraulic oil to the full mark on the dipstick (refer to procedure 4.4).

7. Install the dipstick, and tighten it. Install the covers that were removed.

4.10 Manual Pump and/or Relief Valve

Tools required: Phillips head screwdriver
9/16", two 5/8" and 3/4" wrenches
Hilow cylinder block (P/N 87V287S)
Solid oil filler plug
Packing pad
E-ring removal tool

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Remove the motor cover and two side covers at the foot end of the bed.

4. Remove the hilow cylinder block.

5. Lower the head, knee, and hilow functions to their lowest position.

6. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

7. Install the weight frame packing shims to avoid damage to the load beams.

CAUTION:
Install the weight frame packing shims or damage to the unit could occur.

8. Place all four siderails in the stored position. Tie the left side siderails to the bed.

9. Turn the forward edge of the two left side casters toward the left side of the bed.

10. Set the brakes using the brake pedal.

11. **Early version only.** Replace the breather style oil fill plug with a solid plug (see figure 4-5 on page 4-19).

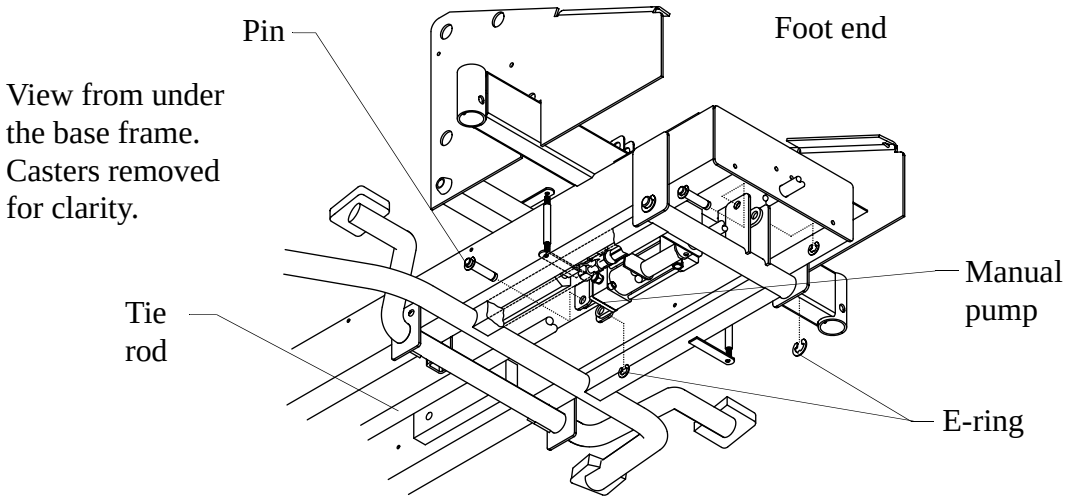
CAUTION:
Do not operate the hydraulic functions with the solid plug installed in the reservoir. Replace the solid oil fill plug with the breather plug before operating any hydraulic functions.

WARNING:
Do not attempt to turn the unit without assistance. Serious personal injury or damage to the unit could occur.

12. Place a large packing pad along the left side of the bed. With assistance, carefully turn the bed over onto its left side.

13. Disconnect the hydraulic hoses from the manual pump (refer to procedure 4.5) (see figure 4-7 on page 4-24).
    a. If necessary, remove the tie rod to improve access to the hose fittings.
    b. Prepare for some hydraulic oil leakage by placing rags under the hose fittings. Tie the end of the hoses up high, or plug them to avoid excessive hydraulic oil leakage.

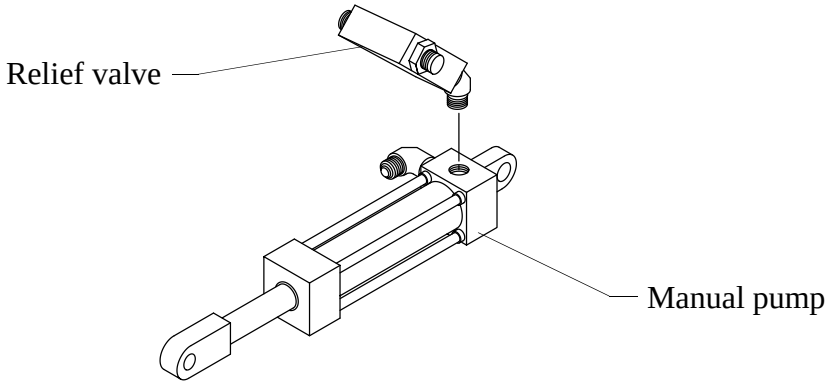
Figure 4-7. Manual Pump and/or Release Valve



14. Remove the two lower E-rings, the two pins, and the manual pump.

15. Observe the position of the relief valve on the manual pump. Remove the relief valve from the manual pump (see figure 4-8 on page 4-24).

Figure 4-8. Manual Pump and Relief Valve



Replacement

1. Assemble the replacement relief valve and/or manual pump to each other. Install the relief valve on the manual pump in the same position it was in prior to disassembly.

CAUTION:
Do not over tighten and then loosen the relief valve. Over tightening may cause an oil leak.

2. Install the manual pump/relief valve assembly in the bed with two pins and two E-rings (see figure 4-7 on page 4-24).

3. Connect and torque the hydraulic hoses to the manual pump/relief valve assembly (refer to procedure 4.5).

4. If previously removed, install the tie rod.

WARNING:
Do not attempt to turn the unit without assistance. Serious personal injury or damage to the unit could occur.

5. With assistance, carefully place the bed upright on its casters. Remove the ties from the left side siderails.

6. Remove the weight frame packing shims previously installed.

7. **Early version only.** Remove the solid plug from the reservoir, and install the breather style oil fill plug (see figure 4-5 on page 4-19).

8. Install all of the covers that were removed.

9. Purge the air from the hydraulic system (refer to procedure 4.4).

10. Check for proper operation of the bed.

4.11 Master Lockout Switch

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

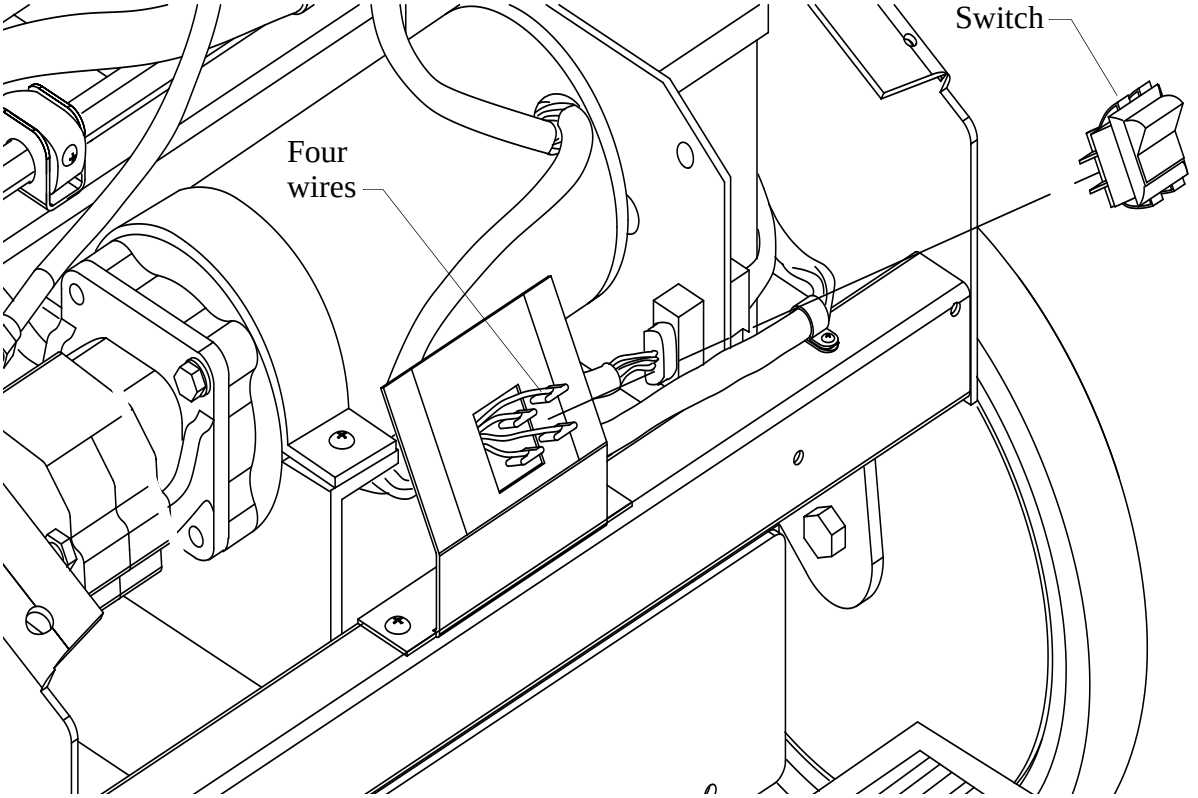
3. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

4. Remove the motor cover at the foot end of the bed.

5. Push down on the plastic spring clips near the top of the switch and push the top of the switch out of the mounting bracket. Push up on the bottom spring clips and pull the switch out of the bracket (see figure 4-9 on page 4-27).

Figure 4-9. Master Lockout Switch



Replacement

1. Move the four wires, one at a time, from the old switch to the corresponding terminal on the new switch.
2. Assemble everything in reverse order.
3. Remove the hilow cylinder block.
4. Check for proper operation of the switch.

4.12 Manual Release Valve

Tools required: Hilow cylinder block (P/N 87V287S)
Packing pad
Phillips head screwdriver
Solid oil filler plug
Two 5/8" wrenches
12" adjustable wrench

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Remove the motor cover and two side covers at the foot end of the bed.

4. Remove the hilow cylinder block.

5. Lower the head, knee, and hilow functions to their lowest position.

6. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

7. Install the weight frame packing shims to avoid damage to the load beams.

CAUTION:
Install the weight frame packing shims or damage to the unit could occur.

8. Place all four siderails in the stored position. Tie the left side siderails to the bed.

9. Turn the forward edge of the two left side casters toward the left side of the bed.

10. Set the brakes using the brake pedal

11. **Early version only.** Replace the breather style oil fill plug with a solid plug (see figure 4-5 on page 4-19).

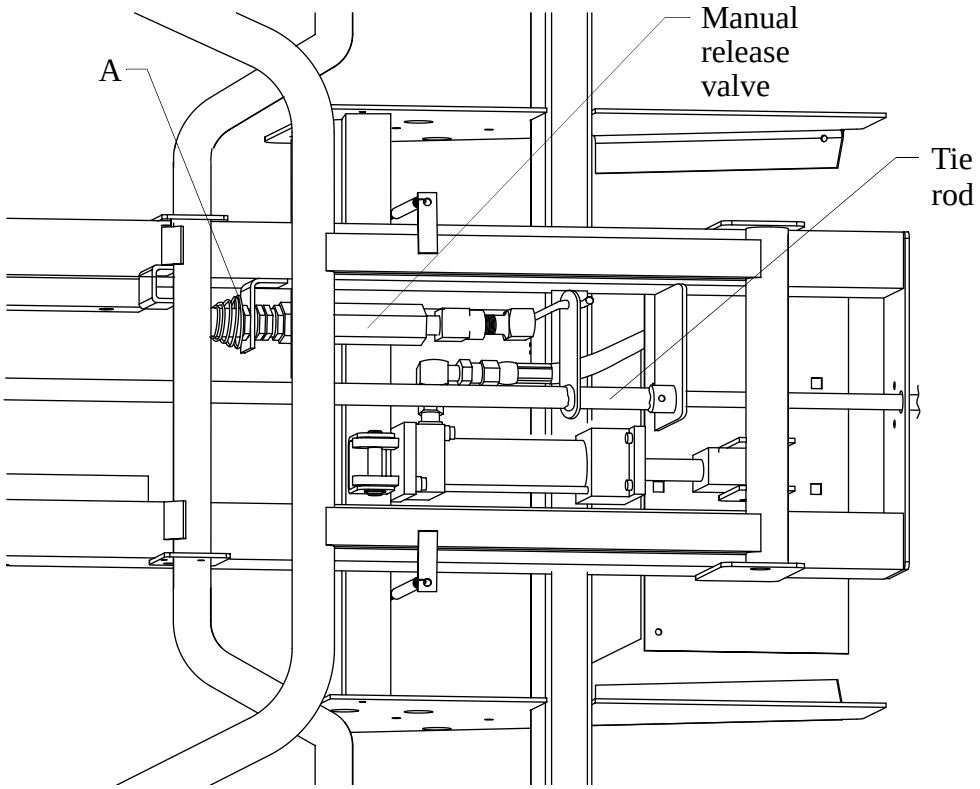
CAUTION:
Do not operate the hydraulic functions with the solid plug installed. Replace the solid oil fill plug with the breather plug before operating any hydraulic functions.

WARNING:
Do not attempt to turn the unit without assistance. Serious personal injury or damage to the unit could occur.

12. Place a large packing pad along the left side of the bed. With assistance, carefully turn the bed over onto its left side.

13. Disconnect the hydraulic hoses from the manual release valve (refer to procedure 4.5) (see figure 4-10 on page 4-30).
    - If necessary, remove the tie rod to improve access to the hose fittings.
    - Prepare for some hydraulic oil leakage by placing rags under the hose fittings. Tie the end of the hoses up high or plug them to avoid excessive hydraulic oil leakage.

Figure 4-10. Manual Release Valve



14. Remove the nut (A) and the manual release valve.

Replacement

1. Install the replacement valve in the bed with the nut (A). Tighten the nut (A).

2. Connect and torque the hydraulic hoses to the manual release valve (refer to procedure 4.5).

3. If previously removed, install the tie rod.

WARNING:
Do not attempt to turn the unit without assistance. Serious personal injury or damage to the unit could occur.

4. With assistance, carefully place the bed upright on its casters. Remove the ties from the left side siderails.

5. Remove the weight frame packing shims previously installed.
6. **Early version only.** Remove the solid plug from the reservoir and install the breather style oil fill plug (see figure 4-5 on page 4-19).
7. Install all of the covers that were removed.
8. Purge the air from the hydraulic system (refer to procedure 4.4).
9. Check for proper operation of the bed.

4.13 Manual Selector Valve

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
12" adjustable wrench
1/2", and two 5/8" wrenches
5/64" allen wrench

Removal

WARNING:
Do not attempt to lift the unit without assistance. Serious personal injury or damage to the unit could occur.

1. Using the hilow feature, raise the bed to the high position. If the hilow function will not raise the bed, get assistance, and manually lift the upper frame to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Remove the top lift arm cover and two side covers at the middle of the bed.

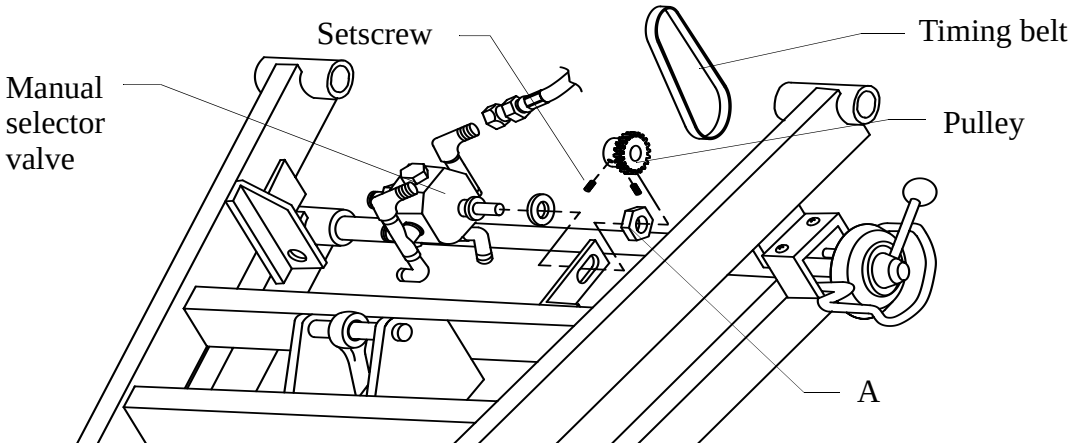
4. Lower the head and knee sections to their lowest position.

5. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

6. Loosen the nut (A), and slide the entire valve toward the head end of the bed (see figure 4-11 on page 4-33). Remove the timing belt from the pulley.

Figure 4-11. Manual Selector Valve



7. Remove the two setscrews and the pulley from the selector valve shaft.

8. For later reference, mark the hoses to ensure correct positioning on the new selector valve.

9. Disconnect the hydraulic hoses from the selector valve (refer to procedure 4.5). Be prepared for some oil leakage by placing rags under the hose fittings. Tie the ends of the hoses to the upper sleep surface to keep oil leakage to a minimum.

10. Remove the selector valve.

Replacement

1. Loosely mount the new selector valve in place.

2. Using the reference marks from the removal procedure, connect and torque the hydraulic hoses to the selector valve (refer to procedure 4.5).

3. Install the pulley on the shaft of the new selector valve with two setscrews. Make sure that the two setscrews are seated on the two flat surfaces of the shaft.

4. Rotate the selector valve gear until the setscrews that hold the gear to the shaft are at the 6 and 9 o'clock positions as you face the pulley from the front of the selector valve. This is the center of the hilow function range.

5. Center the manual selector lever on the HI-LO position.

6. Put the timing belt on the pulleys. Move the selector valve toward the foot end of the bed to tighten the timing belt.

7. Make sure the selector valve and selector lever are centered on the HI-LO function range.

8. Tighten the nut (A) on the selector valve, and check for proper operation of all the manual hydraulic functions including CPR.
   - When checking the hilow function, first raise the bed, and remove the hilow cylinder block.
   - If the bed does not function properly, synchronize the belt and pulleys. Carefully loosen the selector valve, and rotate a pulley one notch clockwise or counterclockwise on the belt until all the manual hydraulic functions work properly. Tighten the nut (A).

9. Install all of the covers that were removed.

10. Purge the air from the hydraulic system (refer to procedure 4.4).

11. Check for proper operation of the bed.

4.14 Manual Selector Valve Timing Belt

Tools required: Hilow cylinder block ((P/N 87V287S)0
Phillips head screwdriver
Two medium straight blade screwdrivers
5/64", 3/32", and 5/32" allen wrenches
12" adjustable wrench

Removal

WARNING:
Do not attempt to lift the unit without assistance. Serious personal injury or damage to the unit could occur.

1. Using the hilow feature, raise the bed to the high position. If the hilow function will not raise the bed, get assistance to manually lift the bed upper frame.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Remove the top lift arm cover and two side covers at the middle of the bed.

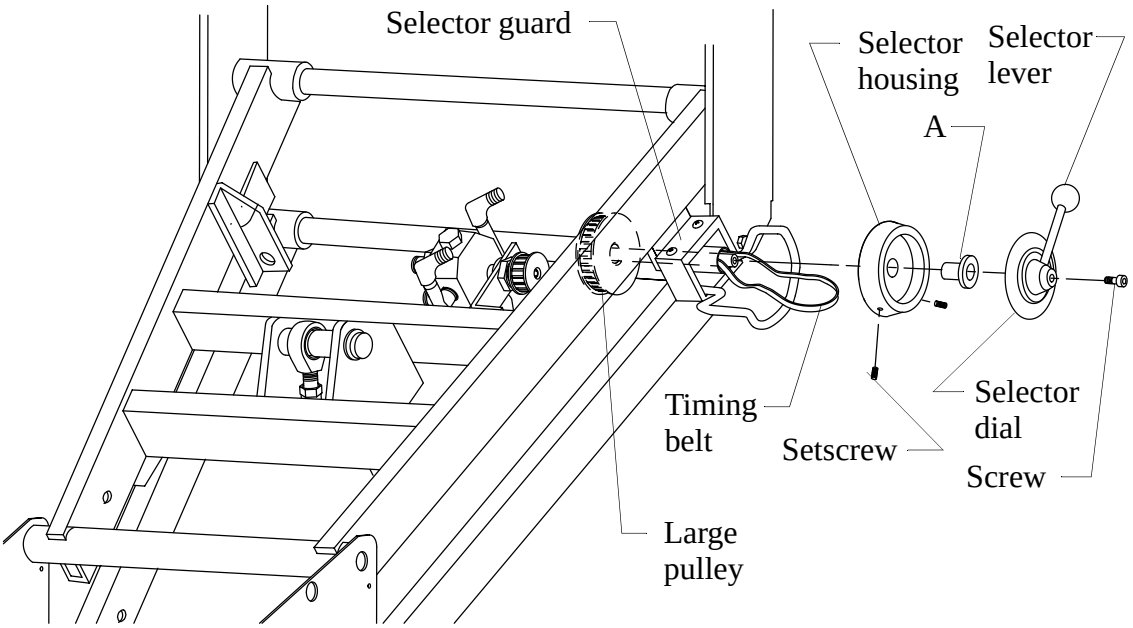
4. Lower the head and knee sections to their lowest position.

5. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

6. Remove the screw that holds the manual selector lever to the selector shaft on the left side of the bed (see figure 4-12 on page 4-36). Remove the selector lever. If the selector lever will not come off:
   - You can install the screw a few turns, and then pull and wiggle the selector lever while lightly tapping on the loose screw.
   - If necessary, use two medium straight blade screwdrivers to carefully pry the selector lever off. You must avoid damaging the selector dial or the selector housing.

Figure 4-12. Timing Belt



7. Remove the selector housing by loosening the two setscrews located on either side. Remove the selector housing and the white plastic bushing (A).

8. Loosen the two setscrews holding the large pulley to the selector shaft. Slide the sprocket and the inside white bushing toward the bed center.

9. Remove the old timing belt.

Replacement

1. Insert the replacement timing belt through the selector guard and onto the pulleys. Make sure the belt is looped around the selector shaft.

2. Install the inner bushing and the large pulley on the selector shaft. Tighten the two setscrews.

3. Install the selector housing. Tighten the two setscrews.

4. Install the bushing (A), the selector lever, and the screw. Make sure the selector levers on both sides of the bed are lined up and in the same position. Tighten the screw.

5. Turn the selector lever indicator to the hilow function.

6. Loosen the nut (A) (see figure 4-11 on page 4-33) and slide the manual selector valve toward the head end of the bed.

7. Rotate the drive pulley on the selector valve until the setscrews that hold the pulley to the shaft are at the 6 and 9 o'clock positions.
   - This is as you face the pulley from the front of the manual selector valve.
   - This will position the selector valve in the center of the hilow function range.

8. Center the manual selector lever on the HI-LO position.

9. Put the timing belt on the pulleys. Move the selector valve toward the foot end of the bed to tighten the timing belt.

10. Make sure the selector valve and selector lever are centered on the HI-LO function range.

11. Tighten the nut (A) on the selector valve, and check for proper operation of all the manual hydraulic functions, including CPR.
    - When checking the hilow function, first raise the bed and remove the hilow cylinder block.
    - If the bed does not function properly, synchronize the belt and pulleys. Carefully loosen the selector valve, and rotate a pulley one notch clockwise or counterclockwisecounterclockwise on the belt until all the manual hydraulic functions work properly. Tighten the nut (A).

12. Install all of the covers that were removed.

13. Purge the air from the hydraulic system (refer to procedure 4.4).

14. Check for proper operation of the bed.

4.15 CPR Release Valve

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
Two medium straight blade screwdrivers
12" adjustable wrench
5/64", 3/32", and 5/32" allen wrenches

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

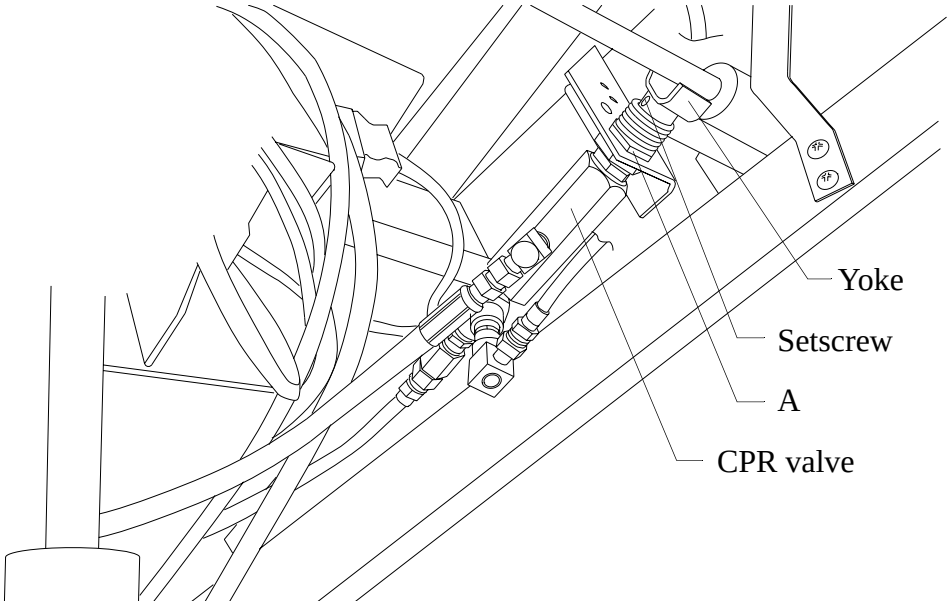
3. Lower the head and knee sections to their lowest position.

4. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Loosen the two setscrews holding the yoke on the end of the valve (see figure 4-13 on page 4-39). Remove the yoke.

Figure 4-13. CPR Release Valve



6. Disconnect the hydraulic hoses from the old CPR release valve (refer to procedure 4.5).
   - Prepare for some oil leakage by placing rags under the hose fittings.
   - As the hoses are removed, connect and torque them to the corresponding connection on the new CPR release valve.
7. Remove the nut (A). Remove the valve from the bed.

Replacement

1. Install the replacement valve. Tighten the nut (A).
2. Install the yoke onto the end of the shaft with the two setscrews.
3. Purge the air from the hydraulic system (refer to procedure 4.4).
4. Check for proper operation of the bed.

4.16 Head Cylinder

Tools required: E-ring removal tool
Phillips head screwdriver
9/16" and 5/8" wrenches

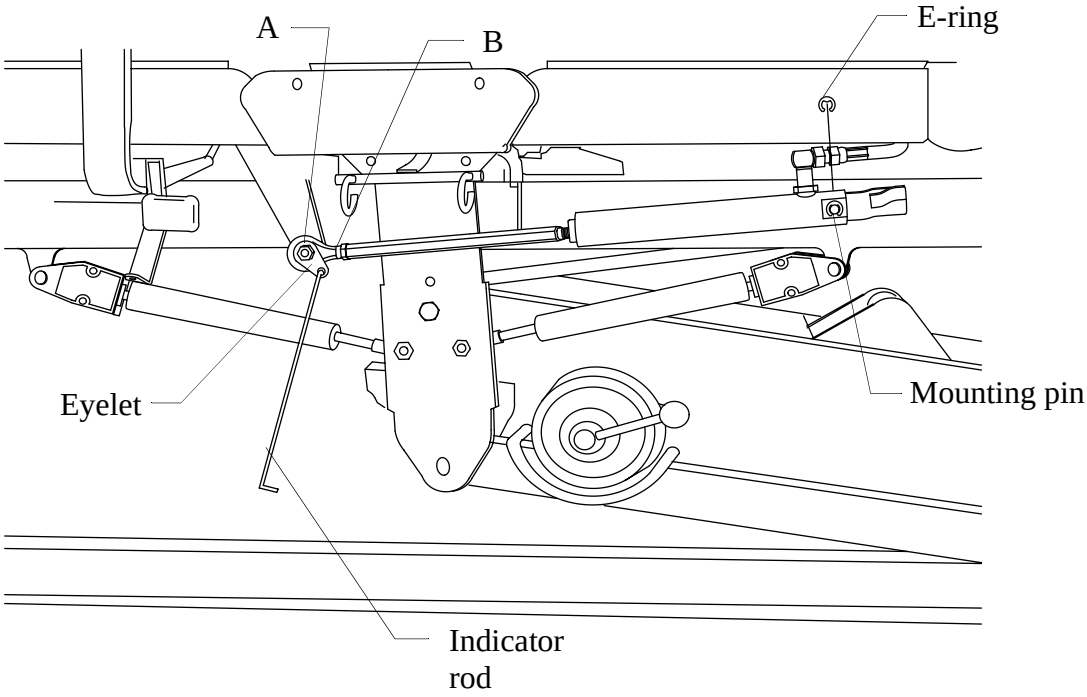
Removal

1. Remove the side cover below the seat section to expose the faulty head cylinder. Remove the indicator rod.

2. Lower the head section to the lowest position.

3. Remove the nut, bolt, and eyelet at (A) from the cylinder shaft (see figure 4-14 on page 4-40).

Figure 4-14. Head Cylinder



4. Disconnect the hydraulic hose from the old head cylinder (refer to procedure 4.5).
   - Prepare for some oil leakage by placing rags under the hose fittings.
   - Tie the hose up to minimize oil leakage.

5. Remove the E-ring from the mounting pin located at the foot end of the cylinder. Remove the mounting pin and cylinder.

Replacement

1. Compare the length of the old and new cylinder. If not the same length, adjust the replacement head cylinder to the same length of the old cylinder Loosen the jam nut (B), and adjust the tie rod end to the correct length.
2. Install the new cylinder in the bed with the mounting pin and E-ring.
3. Install the bolt through the eyelet and cylinder shaft at (A). Loosely install the nut.
4. Install the indicator rod as follows:
   - Hook the indicator rod in the eyelet.
   - Hold the side cover in position, and place the end of the indicator rod through the slot in the side cover.
   - Rotate the eyelet until the indicator rod indicates 0° on the side cover scale.
   - Hold the eyelet in place, remove the cover, and mark the position of the eyelet.
   - Tighten the nut at (A) while maintaining the position of the eyelet.
5. Connect the hydraulic hose to the head cylinder (refer to procedure 4.5).
6. Install the side cover. Make sure the indicator rod is through the slot in the cover and indicates 0°.
7. Purge the air from the hydraulic system (refer to procedure 4.4).
8. Check for proper operation of the bed.

4.17 Knee Cylinder

Tools required: E-ring removal tool
Hilow cylinder block (P/N 87V287S)
1/2", 9/16" and 5/8" wrench

Removal

1. Using the hilow feature, raise the bed to the high position.
2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

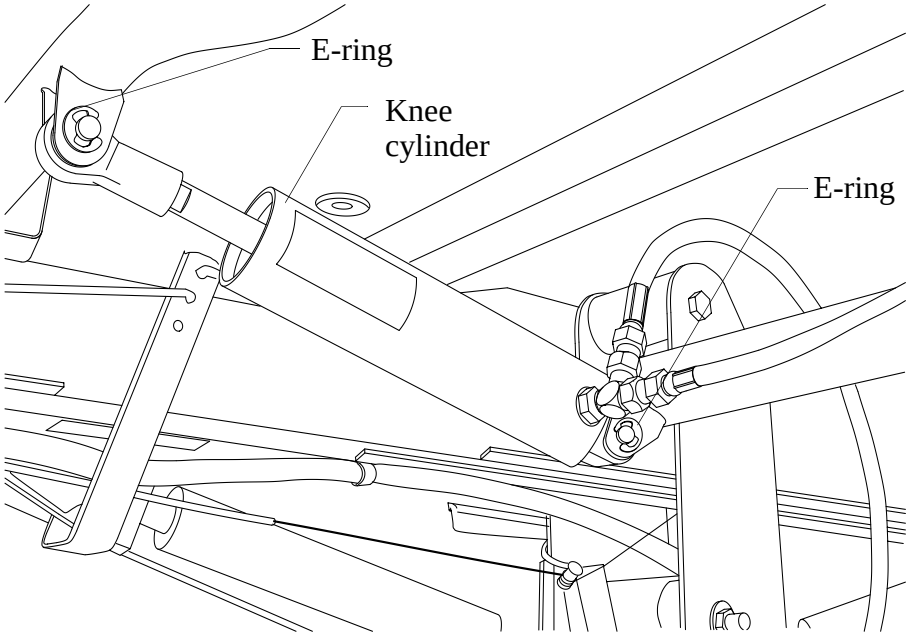
WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections to their lowest position.
4. Put the sleep surface in the full Trendelenburg position.
5. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

6. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.
7. Disconnect the hydraulic hoses from the old cylinder (refer to procedure 4.5).
   - Prepare for some oil leakage by placing rags under the hose fittings.
   - Tie the hoses up to minimize oil leakage.
8. Remove one E-ring from each end of the cylinder. Remove the two pins and the cylinder (see figure 4-15 on page 4-43).

Figure 4-15. Knee Cylinder



Replacement

1. Install the replacement cylinder in the bed using the two pins and two E-rings.
2. Connect and torque the hydraulic hoses to the knee cylinder (refer to procedure 4.5).
3. Purge the air from the hydraulic system (refer to procedure 4.4).
4. Check for proper operation of the bed.

4.18 Hilow Cylinder

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
Two bed stands
12" adjustable wrench
9/16", two 5/8" and 15/16" wrenches

Removal

WARNING:
Do not attempt to lift the unit without assistance. Serious personal injury or damage to the unit could occur.

1. Using the hilow feature, raise the bed to the high position. If necessary, get assistance, and manually lift the sleep surface of the bed.

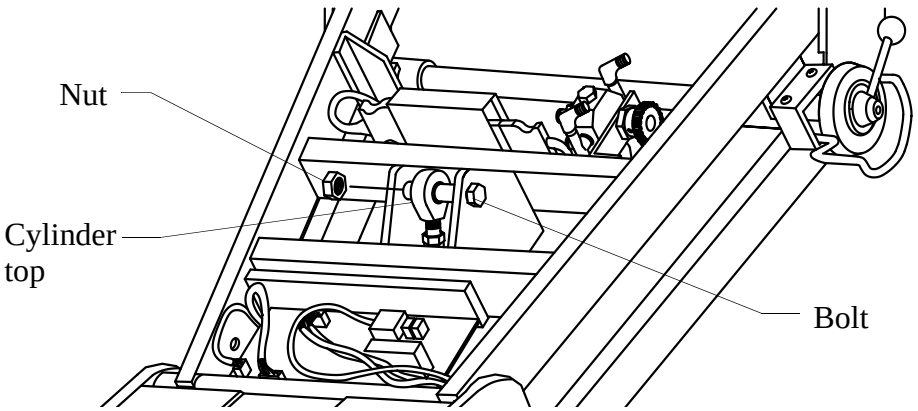
2. Securely install bed stands at both the head and foot ends of the sleep surface frame. Make sure that the hilow cylinder is fully extended.

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Remove the top lift arm cover and two side lift arm covers at the center of the bed. Also remove the manifold cover and base cover.

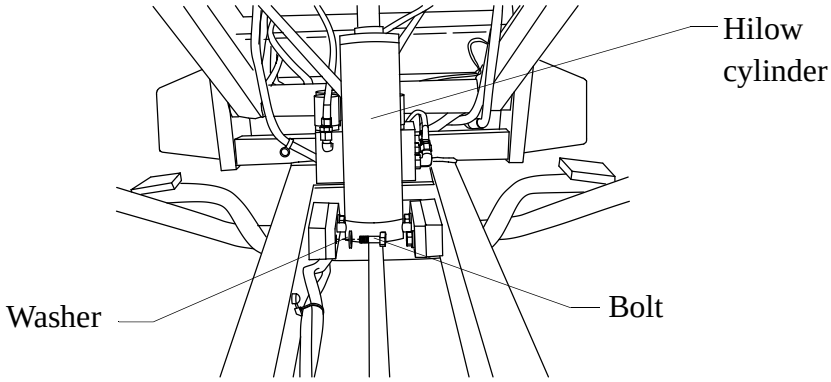
4. Remove the nut and bolt from the top of the cylinder (see figure 4-16 on page 4-44).

Figure 4-16. Hilow Cylinder



5. Disconnect the hydraulic hose from the hilow cylinder (refer to procedure 4.5).
   - Prepare for some oil leakage by placing rags under the hose fittings.
   - Tie the hose up to minimize oil leakage.
6. Remove the four bolts holding the bottom of the cylinder to the base frame. Remove the hilow cylinder (see figure 4-17 on page 4-45).

Figure 4-17. Hilow Cylinder



Replacement

1. Attach the replacement cylinder to the bed base frame with the four bolts and lockwashers (see figure 4-17 on page 4-45). Tighten the bolts.
2. Connect and torque the hydraulic hose to the hilow cylinder (refer to procedure 4.5)
3. Attach the top of the hilow cylinder to the lift frame with the bolt and nut (see figure 4-16 on page 4-44).
4. Install all of the covers that were removed previously.

WARNING:
Do not attempt to lift the unit without assistance. Serious personal injury or damage to the unit could occur.

5. Get assistance, and remove the bed stands.
6. Purge the air from the hydraulic system (refer to procedure 4.4).
7. Check for proper operation of the bed.

4.19 Manifold

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
9/16" and 5/8" wrenches

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

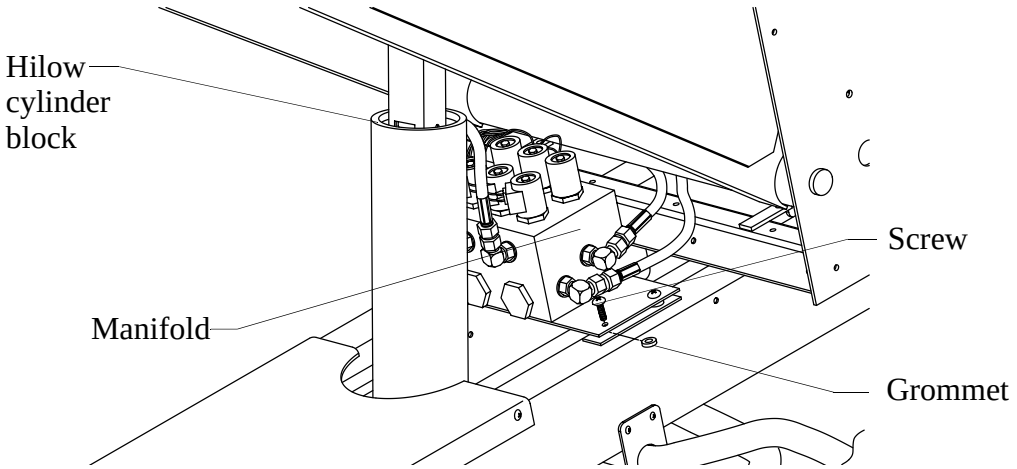
3. Lower the head and knee sections of the bed to their lowest position.

4. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Remove the manifold and coil covers near the hilow cylinder (see figure 4-18 on page 4-46). If necessary, carefully flex the manifold cover as you rotate it counterclockwise to remove it.

Figure 4-18. Manifold



6. Mark the location of the wires on the solenoids and then remove the wires.
7. Mark the location of the hydraulic hoses on the manifold.
8. Disconnect the hydraulic hoses from the manifold (refer to procedure 4.5).
    - Prepare for some oil leakage by placing rags under the hose fittings.
    - Tie the hose up to minimize oil leakage.
9. Remove the four screws and grommets holding the bottom of the manifold to the bed frame. Lift the manifold up and out of the bed.

Replacement

1. Install the new manifold. Put the four grommets between the base of the manifold assembly and the bed frame. Install and tighten the four screws.
2. Connect and torque the hydraulic hoses to the manifold (refer to procedure 4.5).
3. Connect the wires to the six solenoids. Verify that the wires are securely connected.
4. Install the covers that were previously removed.
5. Remove the hilow cylinder block.
6. Purge the air from the hydraulic system (refer to procedure 4.4).
7. Check for proper operation of the bed.

4.20 Manifold Solenoid and Valve

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
9/16" and 5/8" wrenches

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections of the bed to their lowest position.

4. Unplug the unit from its power source.

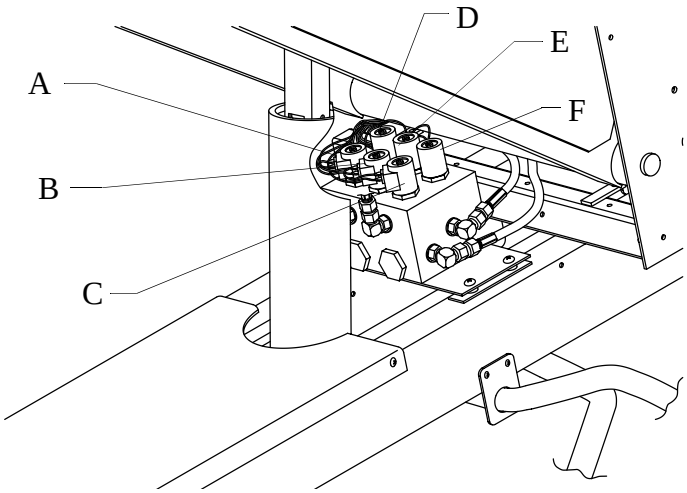
WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Remove the manifold and coil covers near the hilow cylinder. If necessary, carefully flex the manifold cover as you rotate it counterclockwise to remove it.

6. Identify the valve or solenoid to be replaced (see figure 4-19 on page 4-49).
   - A—Hilow Down
   - B—Knee Down
   - C—Head Down
   - D—Hilow Up
   - E—Knee Up
   - F—Head Up

7. Unplug the wire leads going to the solenoid. Remove the nut and lift the solenoid off the valve.

Figure 4-19. Manifold Solenoid and Valve



8. If the valve is not functioning properly, remove it.

Replacement

CAUTION:
All oil must be removed from the manifold cavity before installing a new valve. Failure to do so can result in extruding the bottom o-ring due to the hydrostatic pressure build-up from oil trapped in the valve cavity.

1. Remove any oil from the manifold cavity. Use an ordinary kitchen baster to remove any oil.
2. Replace the valve if it is not functioning properly.
3. Install the new solenoid, and torque the nut to 13-18 in-lbs (1.5-2.0 N•m).
4. Connect the wires to the replacement solenoid. Make sure that the wires are securely connected.
5. Install all of the covers that were previously removed.
6. Remove the hilow cylinder block.
7. Purge the air from the hydraulic system (refer to procedure 4.4).
8. Check for proper operation of the bed.

4.21 Hilow Switch (Nurse Control Panel)

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
Soldering iron and solder

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.

4. Unplug the unit from its power source.

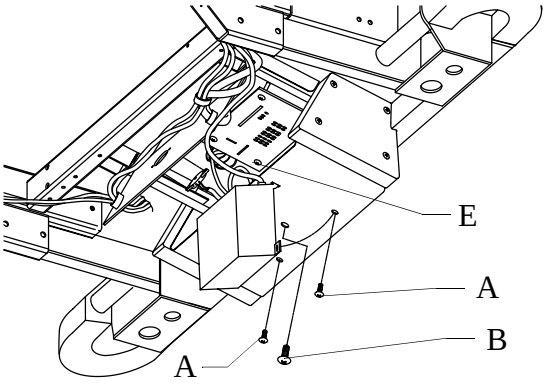
WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.

6. Pull the foot panel out, and swing it up so it forms the shelf.

7. **Scale beds only.** Remove the two screws (A) holding the battery box to the nurse control panel assembly (see figure 4-20 on page 4-51). Remove the grounding screw (B) that holds the scale assembly in place.

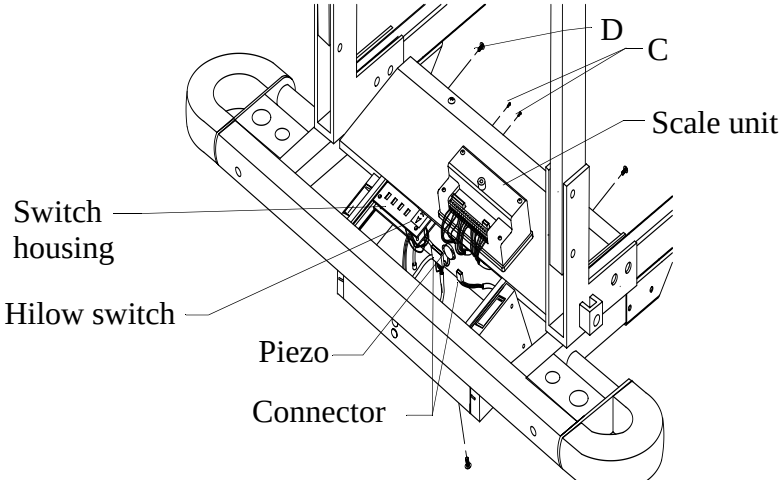
Figure 4-20. Battery Box Removal (Nurse Control Panel)



Bottom side of nurse control panel

8. **Scale beds only.** Remove the two screws (C) holding the piezo alarm (see figure 4-21 on page 4-51).

Figure 4-21. Hilow Switch (Nurse Control Panel)



9. Remove the two screws (D), and carefully slide the switch housing assembly forward toward the head end of the bed.

10. **Scale beds only.** Carefully lift the scale unit up and disconnect the two connectors. You may need to allow the switch housing to slide toward the foot end of the bed to provide enough cable length to access the connectors. Lay the scale on its face out of your way.

11. Slide the switch housing toward the foot end of the bed to allow access to peel and remove the black switch identification label off the switch housing assembly. Discard the old label.

12. Pull the hilow switch up and out of the bracket.

13. Mark the wire locations. Remove the solder and wires from the old switch.

Replacement

1. Solder the wires to the replacement switch. Make sure the wires are soldered to the correct pads of the replacement switch.
2. Clean off any residual label adhesive that may be sticking to the bracket. Apply the new switch identification label to the switch housing assembly.
3. **Scale beds only.** Connect the two connectors to the scale unit and install the scale unit with the screw (B). Slide the switch housing toward the foot end of the bed.
4. **Scale beds only.** Locate the piezo and mount it to the switch housing with the screws (C).
5. Install the switch housing screws (D).
6. **Scale beds only.** Assemble the battery box with the screws (A).
7. Remove the hilow cylinder block.
8. Check for proper operation of the bed.

4.22 Lockout Switch (Nurse Control Panel)

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
Soldering iron and solder

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.

4. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.

6. Pull the foot panel out and swing it up so it forms the shelf.

7. **Scale beds only.** Remove the two screws (C) that secure the piezo alarm (see figure 4-21 on page 4-51).

8. Remove the two screws (D) and carefully slide the switch housing assembly forward toward the head end of the bed.

9. Remove the three screws (E) that hold the lockout switch circuit board in place (see figure 4-20 on page 4-51). Carefully lower the circuit board and disconnect the three connectors. Remove the ground strap screw from the switch housing. Remove the circuit board.

Replacement

1. Replace the individual lockout switch by removing the solder and wires from the old switch and soldering the new one in place. Or, replace the complete board assembly.

2. Slide the switch housing toward the foot end of the bed.

3. **Scale beds only.** Locate the piezo and mount it to the switch housing with the screws (C) (see figure 4-21 on page 4-51).

4. Install the switch housing with the screws (D).

5. Remove the hilow cylinder block.

6. Check for proper operation of the bed.

4.23 Piezo Alarm (Nurse Control Panel—Scale Bed Only)

Tools required: Extraction tool (SA3658)
Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.

4. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.

6. Pull the foot panel out and swing it up so it forms the shelf.

7. Remove the two screws (A) holding the battery box to the nurse control panel assembly (see figure 4-20 on page 4-51). Remove the grounding screw (B) that holds the scale assembly in place.

8. Remove the two screws (C) holding the piezo alarm (see figure 4-21 on page 4-51).

9. Remove the two screws (D) and carefully slide the switch housing assembly forward toward the head end of the bed. Carefully lift the scale unit up and disconnect the two connectors. You may need to allow the switch housing to slide toward the foot end of the bed to provide enough

cable length to access the connectors. Lay the scale on its face out of your way.

10. Using extraction tool SA3658, remove the two piezo wires from the connector.

Replacement

1. Push the wire terminals on the replacement piezo into the connector. Connect the black wire to position #8 and the red wire to position #9.
2. Connect the two connectors to the scale unit and install the scale unit with the screw (B) (see figure 4-20 on page 4-51). Slide the switch housing toward the foot end of the bed.
3. Locate the piezo and mount it to the switch housing with the screws (C) (see figure 4-21 on page 4-51).
4. Install the switch housing screws (D).
5. Assemble the battery box with the screws (A) (see figure 4-20 on page 4-51).
6. Remove the hilow cylinder block.
7. Check for proper operation of the bed.

4.24 Load Beam (Scale Bed Only)

Replacement

The sleep surface frame of the Century CC Bed rides on four individually loaded beams that work in conjunction with the scale unit located in the nurse control panel. The load beams are very sensitive devices that must be calibrated whenever a replacement beam is installed. There are two styles of load beams (early and current versions). An early version scale should not be used with more than two new style load beams. If you have a load beam that is not functioning properly, the bed must either be serviced by a trained Hill-Rom representative or you must send the bed to Hill-Rom for repair.

The load beams are identified by location in the following table:

Table 4-1. Identification of Load Beam Locations

Load Beam	Location
1	Left-hand head
2	Left-hand foot
3	Right-hand foot
4	Right-hand head

4.25 Scale Unit (Standard Configuration)

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
Small standard screwdriver

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.

4. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

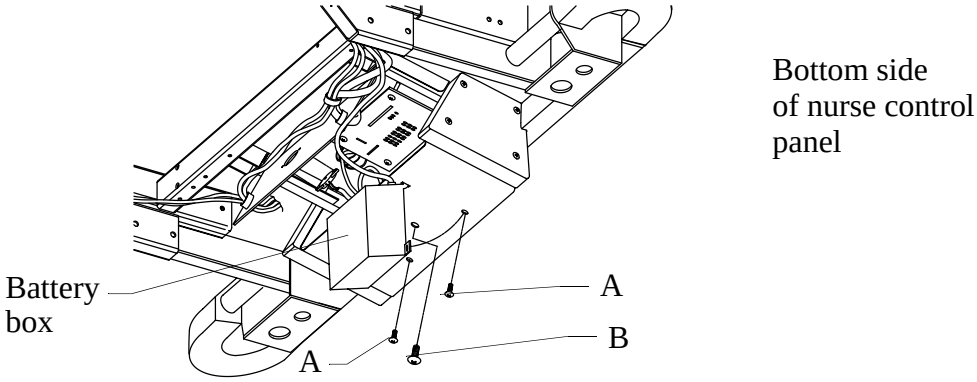
5. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.

6. Pull the foot panel out and swing it up so it forms the shelf.

7. Remove the two screws (A) holding the battery box to the nurse control panel assembly (see figure 4-22 on page 4-59). Remove the grounding screw (B) which holds the scale assembly in place.

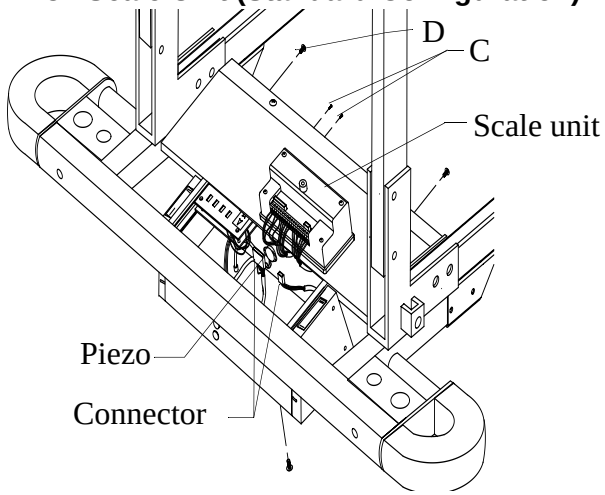
8. Remove the two screws (C) holding the piezo alarm (see figure 4-23 on page 4-59).

Figure 4-22. Battery Box Removal (Standard Configuration)



9. Remove the two screws (D) and carefully slide the switch housing assembly forward toward the head end of the bed. Carefully lift the scale unit up and disconnect the two connectors. You may need to allow the switch housing to slide toward the foot end of the bed to provide enough cable length to access the connectors. Lay the scale on its face out of your way.

Figure 4-23. Scale Unit (Standard Configuration)



10. Mark the individual wires going to the 18 terminals of the scale unit. Remove these wires from the old unit.

Replacement

1. Install the wires in the replacement scale unit. Make sure every wire is in the same location as in the old scale unit.

2. Connect the two connectors to the scale unit and install the scale unit with the screw (B) (see figure 4-22 on page 4-59). Slide the switch housing toward the foot end of the bed.

3. Locate the piezo and mount it to the switch housing with the screws (C) (see figure 4-23 on page 4-59).

4. Install the switch housing screws (D).

5. Assemble the battery box with the screws (A) (see figure 4-22 on page 4-59).

6. Remove the hilow cylinder block.

7. Calibrate the scale system (refer to procedure 4.28).

8. Check for proper operation of the bed.

4.26 Scale Unit (VDE Configuration)

Tools required: Hilow cylinder block (P/N 87V287S)
Phillips head screwdriver
Small standard screwdriver

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.

4. Unplug the unit from its power source.

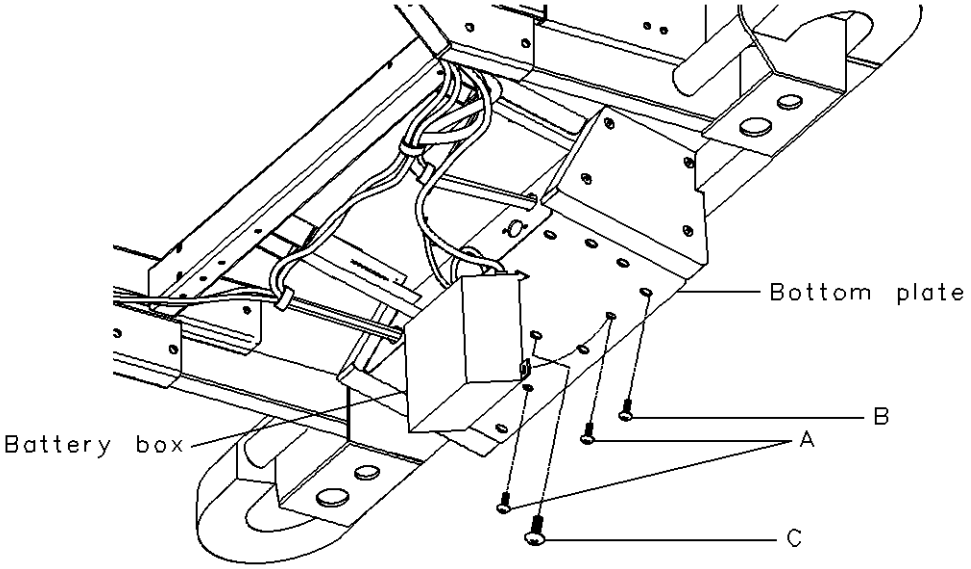
WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.

6. Pull the foot panel out and swing it up so it forms the shelf.

7. Remove the two screws (A) that hold the battery box to the nurse control panel assembly (see figure 4-24 on page 4-62). Remove the 10 screws (B) from the outer edge of the bottom plate of the nurse control panel housing.

Figure 4-24. Scale Unit (VDE Configuration)



8. Remove the grounding screw (C) that holds the scale unit to the bottom plate. Lower the bottom plate carefully.

9. Disconnect the two connectors from the scale unit.

10. Mark the individual wires going to the 18 terminals of the scale unit. Remove these wires from the old unit.

Replacement

1. Install the wires in the replacement scale unit. Make sure every wire is in the same location as in the old scale unit.

2. Connect the two connectors to the scale unit and install the scale unit to the bottom plate with the screw (C).

3. Make sure all of the wires are correctly attached. Install the bottom plate to the nurse control panel housing with the 10 screws (B).

4. Assemble the battery box with the screws (A).

5. Remove the hilow cylinder block.

6. Calibrate the scale system (refer to procedure 4.28).

7. Check for proper operation of the bed.

4.27 Battery (Scale Bed Only)

Tools required: Phillips head screwdriver

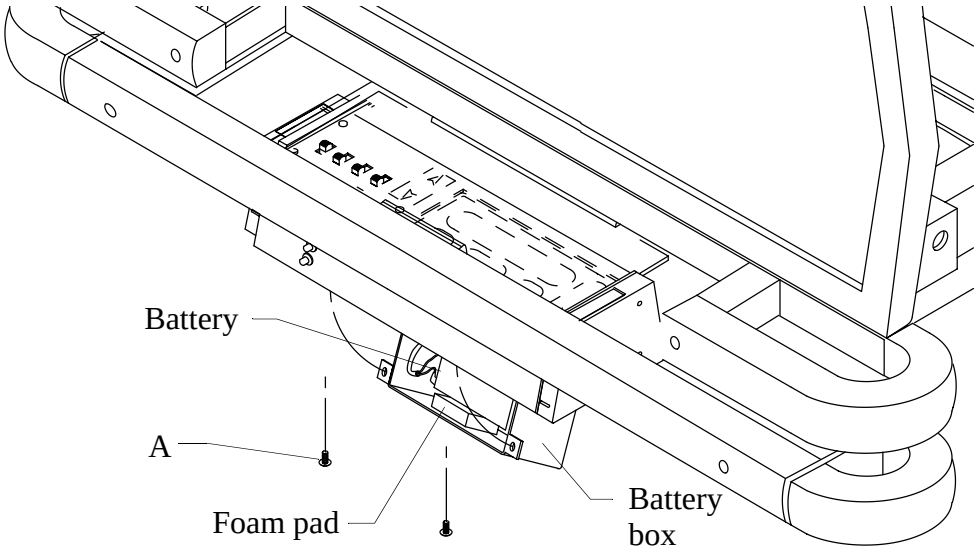
Removal

1. Using the hilow feature, raise the bed to the high position.
2. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.
3. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

4. Remove the two screws (A) that hold the battery box to the bottom of the nurse control panel housing (see figure 4-25 on page 4-63).

Figure 4-25. Battery (Scale Bed Only)



5. Lower the battery box to expose the battery. Note the placement and position of the old battery and the positive and negative terminal lead locations.
6. Disconnect the terminals from the old battery. Remove the old battery.

Replacement

1. Install the new battery in the battery box. Connect the wire leads. The battery should be against the foam pads or the switch back terminals.

2. Assemble the battery box to the nurse control panel housing with the two screws (A).

NOTE:
It is recommended that you allow the new battery to charge for 24 hours with the bed plugged in to a power source. This will bring the battery to a full charge.

4.28 Load Beam Constant Entry (Scale Bed Only)

Each time the scale unit or a load beam is replaced, the constant of the individual load beams must be entered into the scale unit memory.

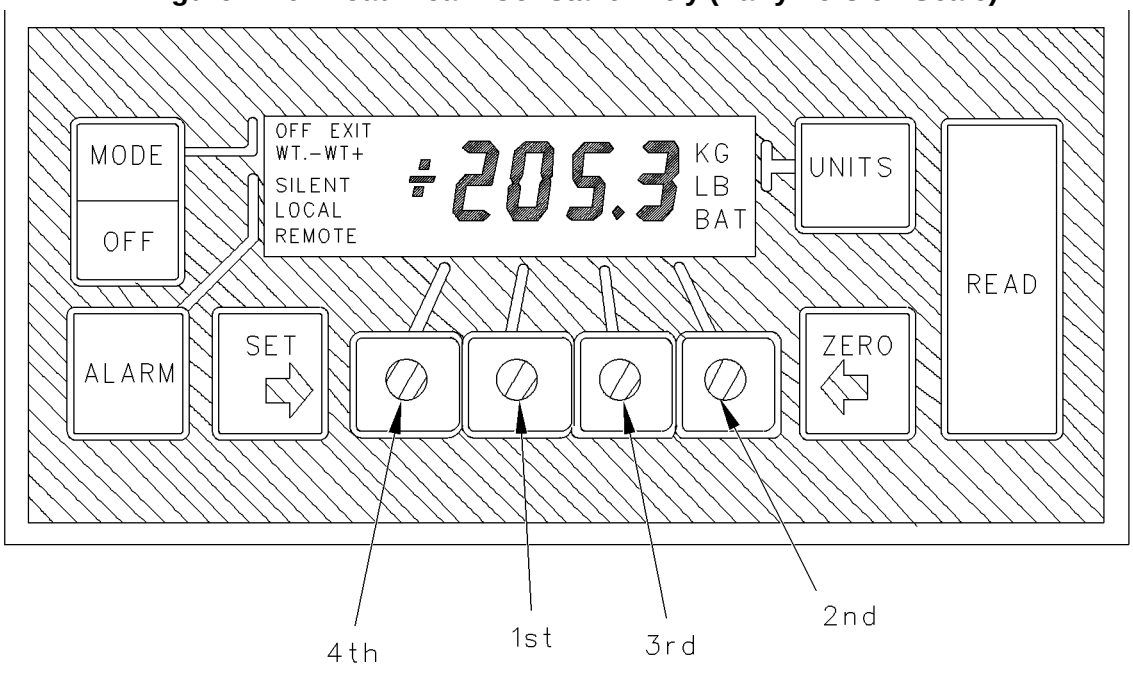
Load Beam Constant Entry Procedure (Early Version Scale)

NOTE:
Any time that the scale unit loses power either by battery failure or scale replacement, the scale memory is lost. The load beam constants must be entered again.

NOTE:
If a function key is not pressed within 2 minutes during the following procedure, the system will automatically return to the normal display.

1. Press the four small identical pads at the bottom of the scale in the following sequence: from left to right press the second, fourth, third, and first pads in that order (see figure 4-26 on page 4-65).
    - This is an access code and must be entered before the constants that are stored in the scale memory can be verified or changed.
    - When you have successfully entered the code the display will alternately flash .1 and a constant value for load beam 1.

Figure 4-26. Load Beam Constant Entry (Early Version Scale)



2. The beam constant should match the value found on the label under the nurse control panel for load beam 1.
   - If the flashing value matches the label, press the MODE pad to display and verify the stored constant for load beams 2, 3, 4, and P5. If all of the constants in the scale memory and the P5 value, 049.0, are correct, press MODE until the normal display appears.
   - If a change to the constants or the P5 value is required, continue to the next step.

3. To change a load beam or the P5 value in the scale memory, press SET and hold while entering the correct values using the four small pads.
   - The correct setting for P5 is 049.0.
   - Press MODE until the display returns to its normal display reading. The scale is ready for operation.

Load Beam Constant Entry Procedure (Current Version Scale)

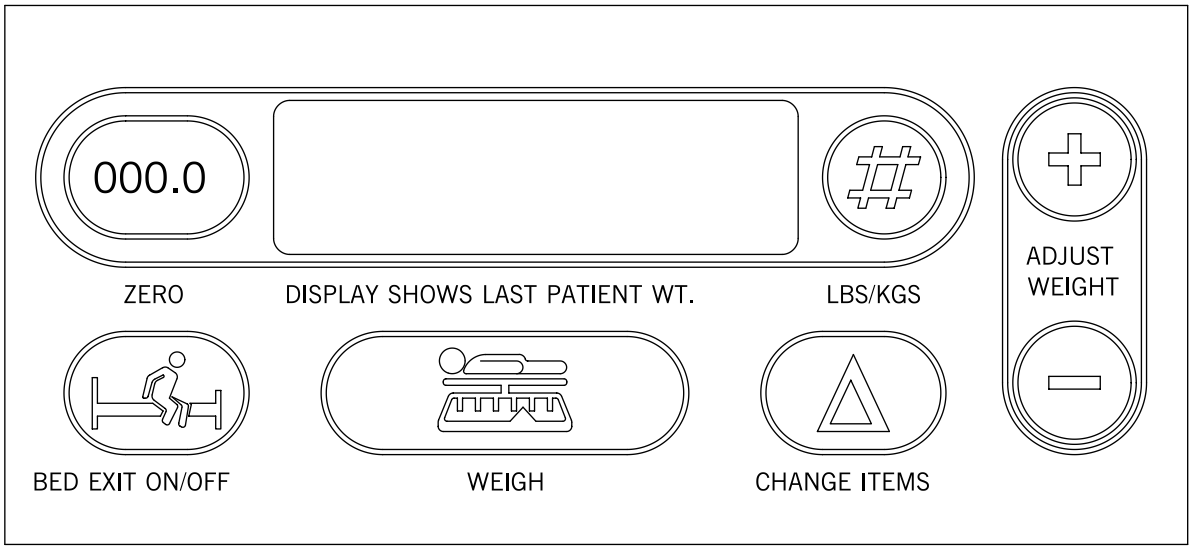
NOTE:
If a function key is not pressed within 2 minutes during this procedure, the system will automatically return to the normal display.

1. To enable the operator to enter the load beam constants, a system entry code must be properly activated. The following four key strokes must be held for approximately 1/2 second and they must be completed within 3 seconds (see figure 4-27 on page 4-67).

   Press: 1. ADJUST WEIGHT (-)
   2. CHANGE ITEMS
   3. ADJUST WEIGHT (+)
   4. ZERO

   Afterwards, the software revision level will appear in the display for 2 seconds.

Figure 4-27. Load Beam Constant Entry (Current Version Scale)



2. After 2 seconds, the display will alternate between displaying 1 (for beam number 1) and the constant currently in the memory for beam number 1. The beam constant should match the value found on the label under the nurse control panel for load beam 1.
   - If the flashing value matches the label, press the CHANGE ITEMS pad to display and verify the stored constant for load beams 2, 3, 4, and P5. If all of the constants and the P5 value, 051.0, are correct, press CHANGE ITEMS until the normal display appears.
   - If a change to the constants or the P5 value is required, continue to the next step.
3. To change the constant of a load beam or the P5 value in the scale memory, press either the "+" or "-" key. A digit will begin flashing in the display. To select the digit you want to change, press the CHANGE ITEMS key until that digit is flashing. To change the flashing digit simply press the "+" or "-" key to increase or decrease the displayed number. Press CHANGE ITEMS to move to the next digit or function.
   - The correct setting for P5 is 051.0.
   - Press CHANGE ITEMS until the display returns to its normal display reading. The scale is ready for operation.

4.29 Nurse Control Panel and Sliding Cover Removal

Tools required: Phillips head screwdriver
Hammer
1" diameter bar

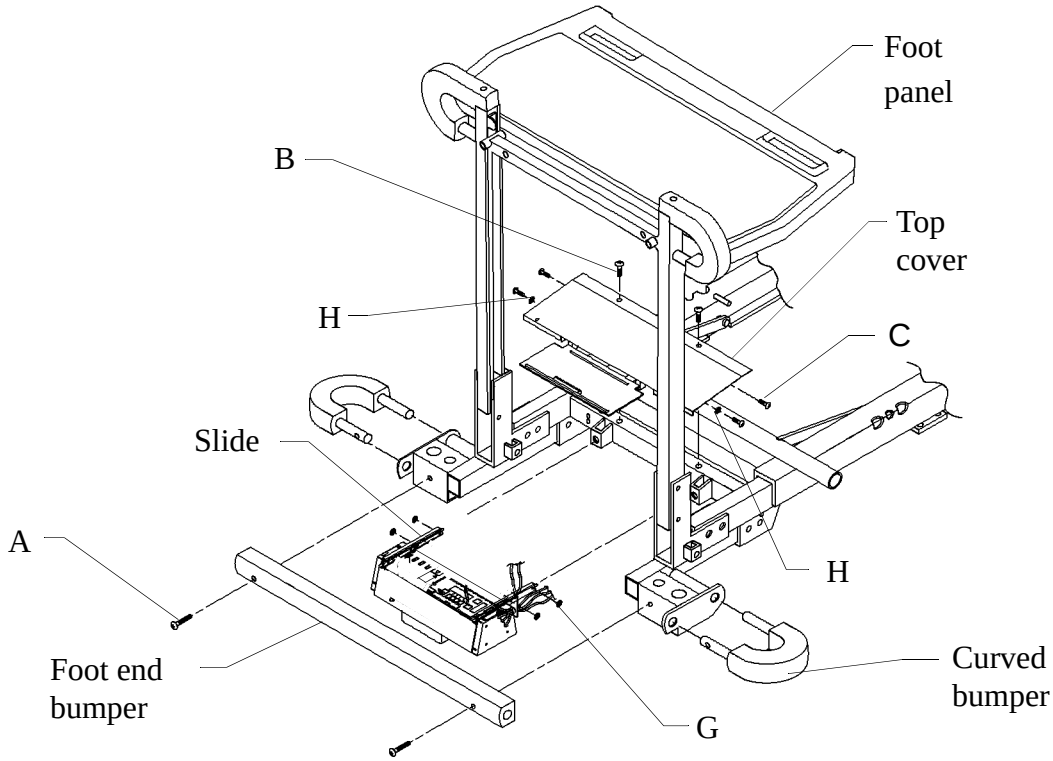
Removal

1. Using the hilow feature, raise the bed to the high position.
2. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.
3. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

4. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.
5. Pull the foot panel out and swing it up so it forms the shelf.
6. Remove the two screws (A) from the foot end bumper (see figure 4-28 on page 4-69). Using a 1" diameter bar or wooden handle, carefully tap the curved bumpers from their position.
   - Do not damage the bumpers or the wing nuts located below the bumpers.
   - When the last curved bumper is removed, the foot end bumper will also come off.

Figure 4-28. Nurse Control Panel and Sliding Cover Removal



7. Remove the two screws (B) from the top cover. These screws hold the nurse control panel assembly to the bed. Do not let the assembly fall.

8. Remove the four screws (C) from the under side of the top cover. Remove the top cover from the nurse control panel. Slide the plastic sliding cover out of the slots in the slide tracks. Do not damage the sliding cover springs.

Replacement

1. Install the plastic sliding cover in the rail slots. Attach the springs to the top cover. Assemble the top cover to the nurse control panel with the four screws (C), flat washers (G), star washers (H), and any ground straps that were previously removed.

2. Install the nurse control panel and top cover to the bed with two screws (B). The pins on the end of the slide rails engage with holes in the upper frame.

3. Hold the foot end bumper in position and install the curved bumpers.

4. Install the two screws (A).

5. Check the bed for proper operation.

4.30 Trendelenburg Indicator and Adjustment

Tools required: Bubble level
Phillips head screwdriver
Needle nose pliers

Removal

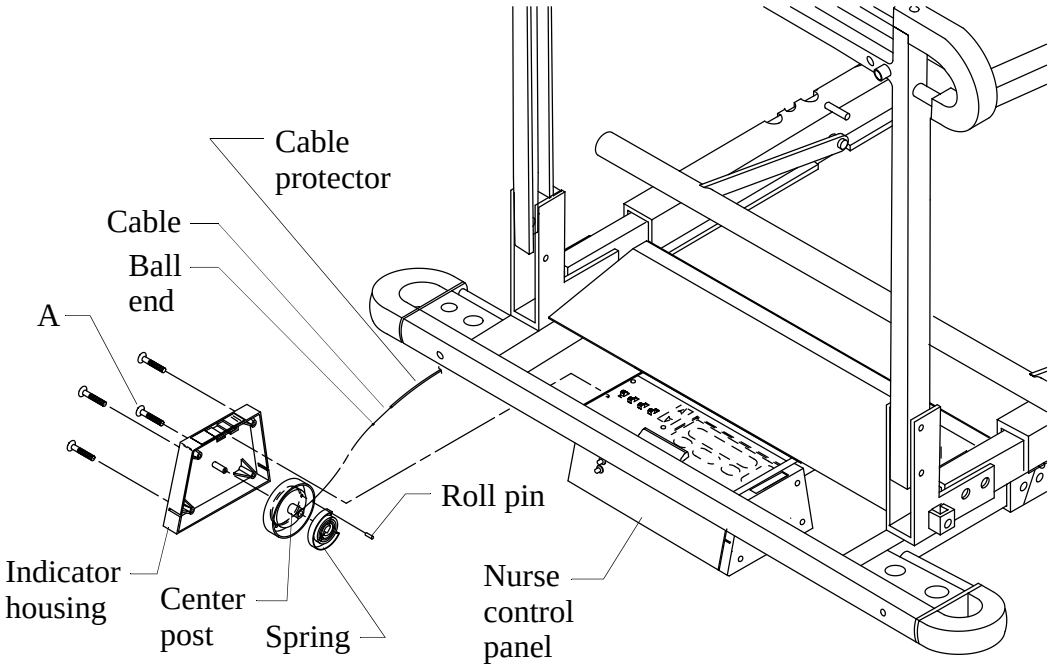
NOTE:
This procedure applies to the Trendelenburg angle indicator. If your bed is also equipped with the Trendelenburg angle limit indicator, this procedure applies to it also.

1. Using the hilow feature, raise the bed to the high position.
2. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.
3. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

4. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.
5. Pull the foot panel out and swing it up so it forms the shelf.
6. Remove the four screws (A) from the indicator housing (see figure 4-29 on page 4-71).

Figure 4-29. Trendelenburg Indicator and Adjustment



7. Hold the end of the spring hooked around the roll pin and slide the spring off of the end of the center post of the indicator wheel.

Replacement

1. Slide the ball end of the cable through the slot in the indicator wheel. Lightly tap and deform the side of the cable groove in the indicator wheel to keep the ball end of the cable from slipping out.

2. Wrap the cable on the indicator wheel so that the cable comes straight out of the cable protector and through the cable slot in the indicator housing.

3. Install the spring so it pulls against the cable.

4. Wrap the spring until the outer coil is about 1 1/2". The spring should not be touching the retaining lip of the indicator wheel.

5. Reassemble the indicator wheel to the nurse control panel. Install the indicator housing with the four screws (A).

6. Check for proper operation of the indicator.
    - Put the bed in the low position. Using a bubble level, level the sleep surface.
    - The Trendelenburg indicators should indicate zero.
    - If the indicator does not read zero, proceed to the adjustment section.

Adjustment

1. If a Trendelenburg angle indicator needs to be adjusted, follow the cable leading from the indicator back to the seat section of the bed.
2. Using the adjustable collar on the cable, adjust the cable. Set the indicator to zero.
3. Check for proper operation of the indicator.

4.31 Siderail Removal

Tools required: Hilow cylinder block (P/N 87V287S)
E-ring removal tool
Small straight blade screwdriver
Side cutters
Wire ties

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

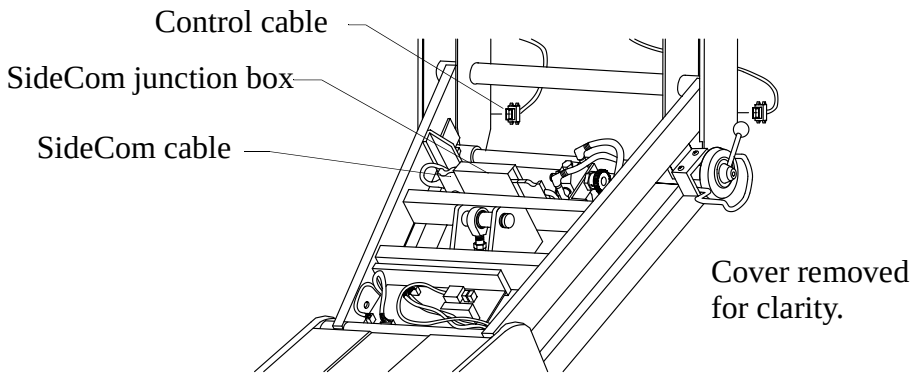
3. Lower the head and knee sections to their lowest position.

4. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Unplug the cables connecting the siderails to the bed. If your bed is equipped with siderail communications, remove the two screws at the SideCom junction box to disconnect the communication cable (see figure 4-30 on page 4-74).

Figure 4-30. Siderail Assembly



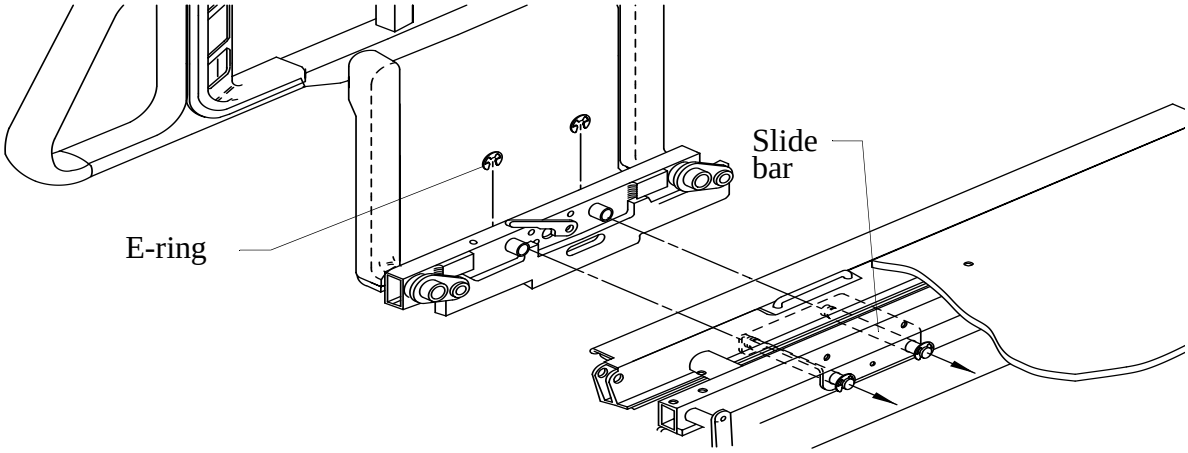
6. Note how the cables are routed for later reference.

7. As necessary, cut and remove the wire ties that hold the electrical cables to the bed.

8. Remove any ground straps that attach the siderail to the frame of the bed.

9. Remove the two E-rings from the slide bars (see figure 4-31 on page 4-74). Push the slide bars out until the siderail can be removed from the bed.

Figure 4-31. Siderail E-rings and Slide Bars



Replacement

1. Install the replacement siderail to the bed. Hold the siderail in position and install the slide bars. Install the E-rings on the slide bars.

2. Route the cables exactly as noted during cable removal. If the bed is equipped with a patient scale, use care to ensure that there is no tension in the cables between the weigh frame and the lower portion of the bed. Tension in the cable can cause faulty scale readings.

3. Attach any ground straps to the siderail that were previously removed.

4. Check for proper operation of the siderail controls.

4.32 Siderail Nurse Call, Lighting, or Bed Control Switch

Tools required: Phillips head screwdriver
Soldering iron and solder or
Crimping tool

Removal

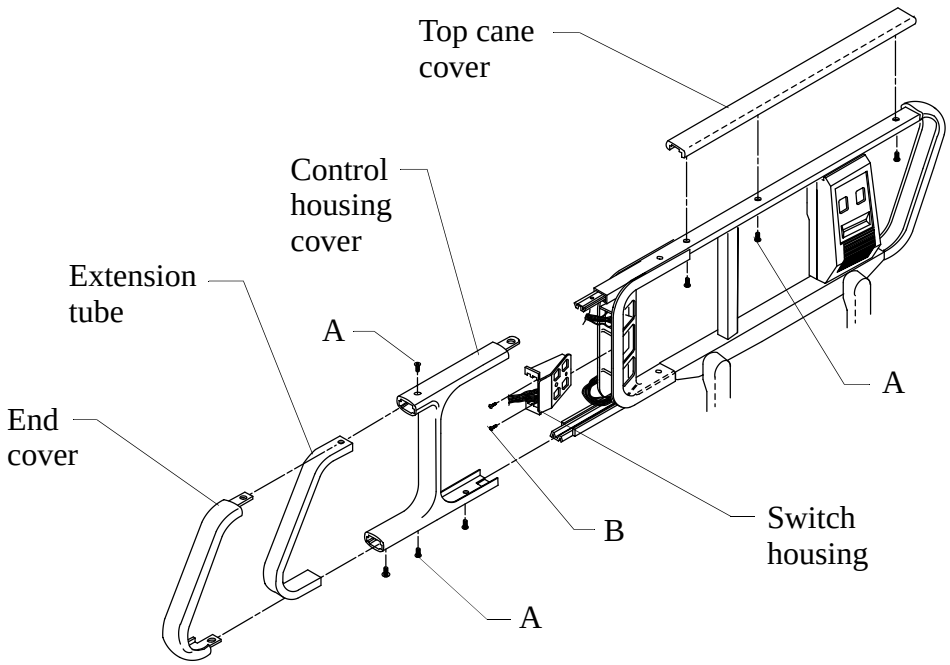
1. Unplug the unit from its power source.

2. Put the siderail into the full up position.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

3. Remove the seven screws (A) (see figure 4-32 on page 4-76). Remove the top cane cover, end cover, extension tube and control housing cover.

Figure 4-32. Siderail Nurse Call, Lighting, or Bed Control Switch



4. Remove the two screws (B) and slide the switch housing out of the siderail.

5. If any old LED indicators are not operating, remove them.

Replacement

1. If necessary, install new LED indicators.
2. Locate the switch to be replaced. Place the replacement switch next to the old switch. Make sure they are the same.
3. If the replacement switch does not have wire leads soldered on it:
   - Melt the solder and remove the wire leads one at a time from the old switch.
   - As you remove a wire from the old switch, transfer the wire to the replacement switch and solder it in place.
4. If your replacement switch does have wire leads already soldered on it:
   - Cut the wires one at a time from the old switch close to the switch.
   - Strip about 3/16" of insulation from the leads. Push the ends into the splice terminal of the corresponding color wire on the replacement switch and crimp the terminal.
5. Assemble the switches into the switch housing and install the switch housing in the siderail. Install the two screws (B).
6. Assemble the control housing cover, the extension tube, the end cover, and the top cane cover with the seven screws (A).
7. Check for proper operation of the siderail controls.

4.33 Siderail LED Indicator

See “Siderail Nurse Call, Lighting, or Bed Control Switch” on page 4-76. for gaining access to and replacement of the LED indicator.

4.34 Siderail Entertainment Controls and Component

Tools required: Phillips head screwdriver
Soldering iron and solder or
Crimping tool

Removal

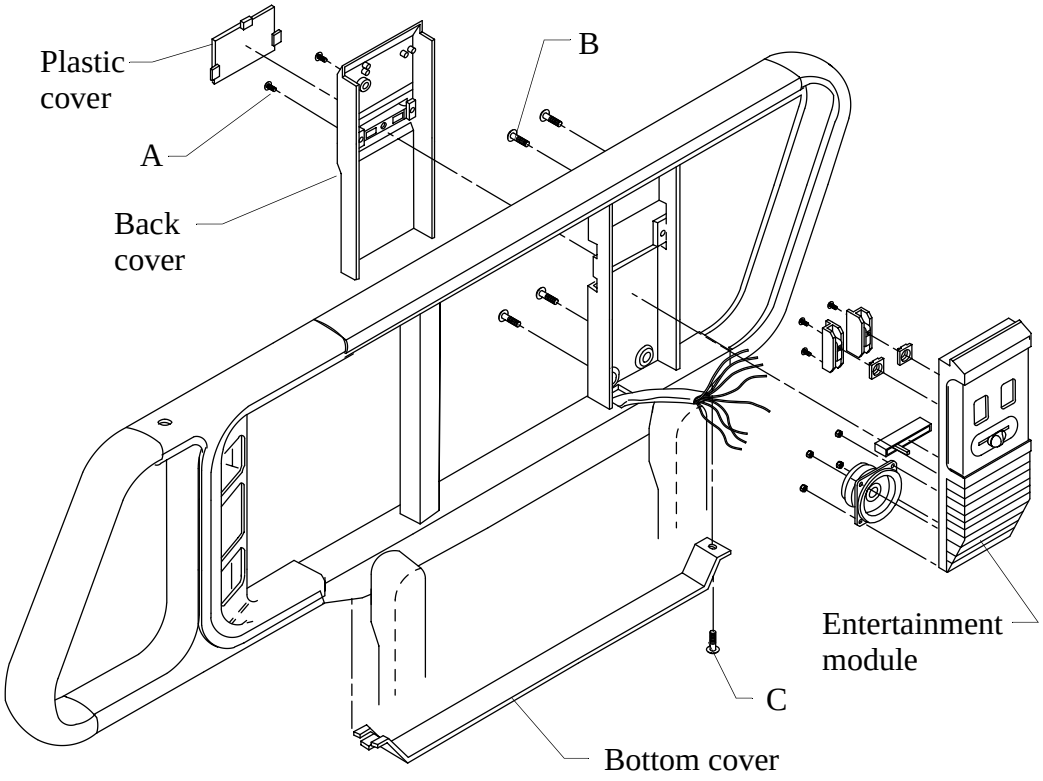
1. Unplug the unit from its power source.

2. Put the siderail into the full up position.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

3. Pry out the small plastic cover from the back cover (see figure 4-33 on page 4-79). Remove the two screws (A) and the back cover.

Figure 4-33. Siderail Entertainment Controls and Component



4. Remove the four screws (B), one screw (C), and the bottom cover. Unplug the connector and lift the entertainment module out of the siderail.

Replacement

1. Replace the old component.
2. Plug the entertainment module into the connector. Place the entertainment module in the siderail.
3. Install the bottom cover with the screw (C).
4. Install the four screws (B).
5. Install the back cover with the two screws (A).
6. Install the small plastic cover in the back cover.
7. Check for proper operation of the controls.

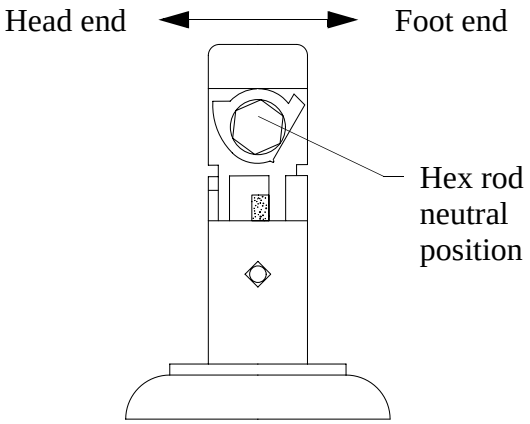
4.35 Caster

Tools required:
- Feeler gage
- Hilow cylinder block (P/N 87V287S)
- Phillips head screwdriver
- 13 mm wrench
- 3/16" allen head wrench
- 5/64" allen wrench
- Punch
- Support block (about 11" tall)
- Hammer

Removal

1. Make sure that the bed's brake and steer system is in the neutral position (see figure 4-34 on page 4-81). Make sure the replacement caster is in the neutral position.

Figure 4-34. Caster Neutral Position



2. Using the hilow feature, raise the bed to the high position.

3. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

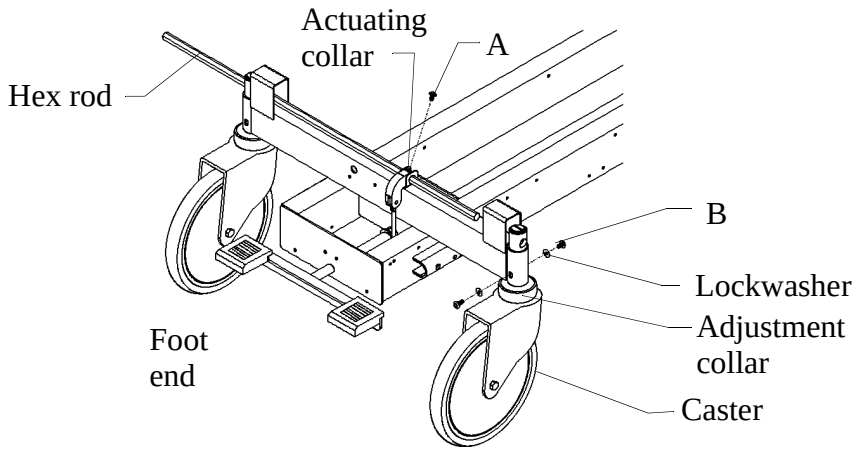
4. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. If you are replacing a head end caster, remove the base cover from the bed. If you are replacing a foot end caster, remove the motor cover and two side covers.

6. Remove the screw (A) holding the actuating collar to the hex rod (see figure 4-35 on page 4-82). Carefully drive the hex rod out of the caster that you are replacing.

Figure 4-35. Caster



WARNING:
Do not attempt to raise the unit without assistance. Serious personal injury or damage to the unit could occur.

7. With assistance, raise the end of the bed where the old caster is located and position the support block under the end of the bed.

8. Remove the two screws (B), lockwashers, and the old caster.

Replacement

1. Make sure the replacement caster is in the neutral position. The wheel should spin freely.

2. Install the replacement caster in the base frame with the two screws (B) and lockwashers.

3. Make sure the hex rod and caster hole are aligned.

4. Slide the hex rod into the replacement caster. Install the screw (A) in the actuating collar.

NOTE:
If you experience difficulty inserting the hex rod, check to see if the actuating cam at the caster hole has changed positions.

5. Check for proper operation of the casters. If adjustment is necessary, proceed to the “Adjustment” section.

6. Install all of the covers previously removed.

Adjustment

Brake and Steer Caster—Steering Adjustment Only

NOTE:
The brake and steer caster is located at the left foot end of the bed as the patient lays in bed. Brake and steer adjustments are the same on the optional 6" casters.

1. Using the hilow feature, raise the bed to the high position.

2. Make sure the brake and steer pedal is in the neutral position.

3. With the motor cover and two side covers removed, remove the two mounting screws (B) from the caster sleeve (see figure 4-35 on page 4-82).

4. To tighten the steer lock, turn the adjustment collar clockwise in 180° increments. To loosen the steer lock, turn the adjustment collar counterclockwise in 180° increments. Do not let the caster turn when turning the adjustment collar.

5. Install the two screws (B).

6. Check for proper operation of the caster. If brake adjustment is necessary, proceed to the “Brake Caster—Brake Adjustment (Tente Casters Only)” section.

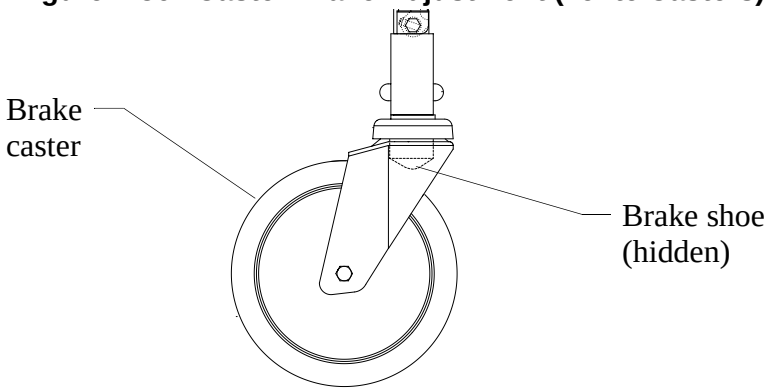
7. Install all of the covers previously removed.

Brake Caster—Brake Adjustment (Tente Casters Only)

1. Make sure the brake and steer pedals are in the neutral position.

2. Using a metal punch and hammer, gently spin the plastic brake shoe to adjust the gap between the brake shoe and the contact surface of the caster (see figure 4-36 on page 4-84).
   - Turn the brake shoe clockwise to tighten, counterclockwise to loosen.
   - The gap for 6" casters should be 0.045-0.055” (1.15-1.39 mm). Use a feeler gage to measure the gap.
   - The gap for 8" casters should be 0.035-0.045” (0.89-1.14 mm). Use a feeler gage to measure the gap.

Figure 4-36. Caster Brake Adjustment (Tente Casters)



3. Check for proper operation of the caster.

Brake Caster—Brake Adjustment (Colson Casters Only)

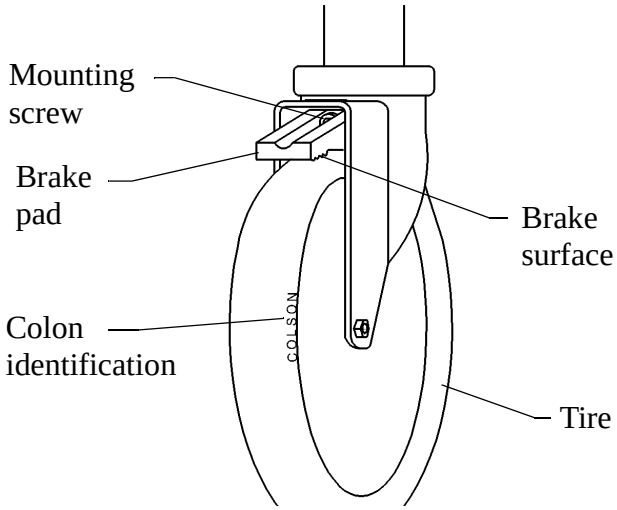
1. Make sure the brake and steer pedals are in the neutral position.

2. Install the support block under the unit to raise the caster off of the floor.

3. Using a 13 mm wrench, remove the wheel. Do not remove the entire caster.

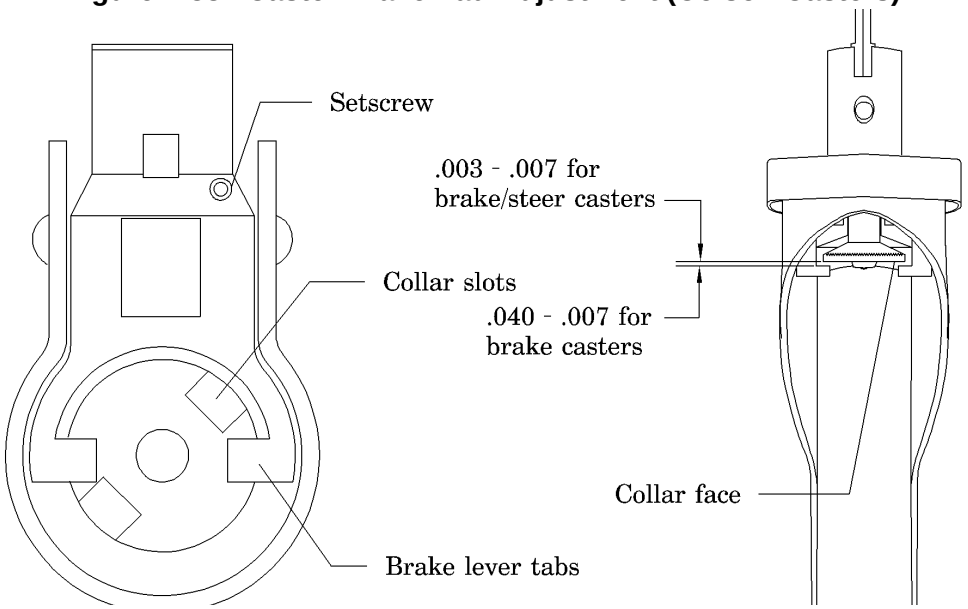
4. Using a 5/64" allen wrench, adjust the setscrew so that the brake lever tabs are 0.040-0.060" (1.02-1.52 mm) from the face of the collar for the three brake casters (see figure 4-37 on page 4-85).
   - Make the adjustment to the brake lever tab closest to the face of the collar.
   - Apply some pressure against the setscrew when making this adjustment.

Figure 4-37. Caster Brake Lever Adjustment (Colson Casters)



5. Using a 5/64" allen wrench, adjust the setscrew so that the brake lever tabs are 0.003-0.007" (0.08-0.17 mm) from the face of the collar for the brake and steer caster.
   - Make the adjustment to the brake lever tab closest to the face of the collar.
   - Apply some pressure against the setscrew when making this adjustment.
6. Using a 13 mm wrench, install the wheel.
7. Rotate the wheel. If there is a high spot on the tire, mark it with masking tape. Place tape on the side of the tire.
8. Remove the support block from under the unit.
9. Rotate the tire until the high spot is under the brake pad.

Figure 4-38. Caster Brake Pad Adjustment (Colson Casters)



10. Measure the gap between the brake pad and the tire. If the gap is larger than 0.010" (0.26 mm) or 0.000" (0.00 mm), adjust the brake pad as follows:

NOTE:
When measuring the gap, hold the brake pad up against the brake lever to ensure an accurate measurement.

    a. Using a 5/16" allen wrench, loosen the cap screw that holds the brake pad to the brake lever.
    b. Place the brake pad within 0.001-0.010" (0.03-0.25 mm) to the tire.
    c. Torque the cap screw to 20-30 in-lb (2.3-3.3 N•m).

11. Check for proper operation of the caster.

4.36 Gas Cylinder

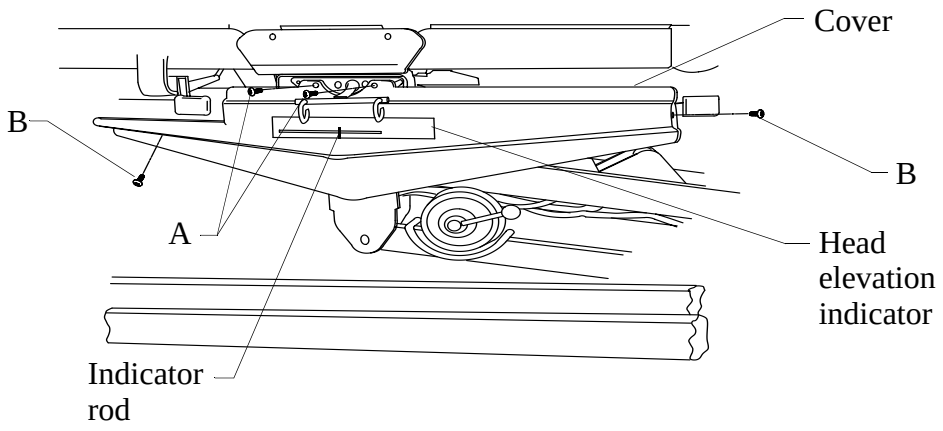
Tools required: Phillips head screwdriver
9/16" open end wrench
E-ring removal tool
Small punch
11/16" socket wrench

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Remove the two screws (A) and the two screws (B) from the side cover that covers the faulty gas cylinder (see figure 4-39 on page 4-87). Disconnect the indicator rod from the slot of the head elevation indicator.

Figure 4-39. Bed Side Covers



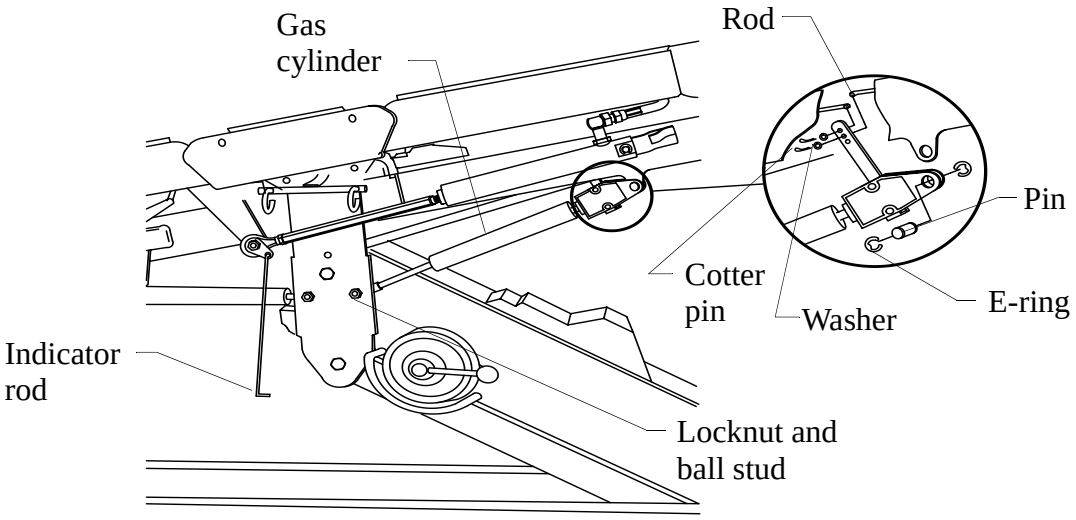
3. If you need to replace a foot end gas cylinder, remove the lift frame covers.

4. Fully extend the faulty gas cylinder as follows:
   - Position the bed in full Trendelenburg to remove the foot end cylinders.
   - Position the bed in full Reverse Trendelenburg to remove the head end cylinders.

5. Remove the cotter pins, washers, and linkage rods that are attached to the gas cylinder activating lever (see figure 4-40 on page 4-88).

6. Remove the locknut from the ball stud.

Figure 4-40. Gas Cylinder



7. Remove the E-ring and pin holding the mechanism end of the gas cylinder in place. Remove the gas cylinder from the bed. If necessary, use a punch to push the ball stud out of the mounting hole. Rotate the ball stud to gain enough clearance to completely remove the gas cylinder.

Replacement

CAUTION:
Do not attempt to adjust the actuation mechanism on the replacement gas cylinder. These mechanisms are adjusted at the factory.

1. Make sure you have the correct replacement gas cylinder. The foot cylinder is charged with a force of 1000 newtons. The head cylinder is charged with a force of 600 newtons. The cylinders are marked with either 1000N or 600N on their label.

2. Install the ball stud end of the replacement gas cylinder in the mounting hole.

3. Holding the actuation mechanism in position, install the pin and E-ring. Install the linkage rods, washers, and cotter pins in the actuation mechanism.

4. Install all of the covers previously removed.

5. Check for proper operation of the gas cylinders. Put the bed in the full Trendelenburg and Reverse Trendelenburg positions.

4.37 Master Control Board

Tools required: Hilow cylinder block (P/N 87V287S)
Needle nose pliers
Phillips head screwdriver

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Install a hilow cylinder block on the hilow cylinder (refer to procedure 4.1).

WARNING:
Do not work under an overhead load without using the appropriate support and safety equipment. Failure to use the correct equipment could result in serious personal injury or damage to the unit.

3. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.

4. Unplug the unit from its power source.

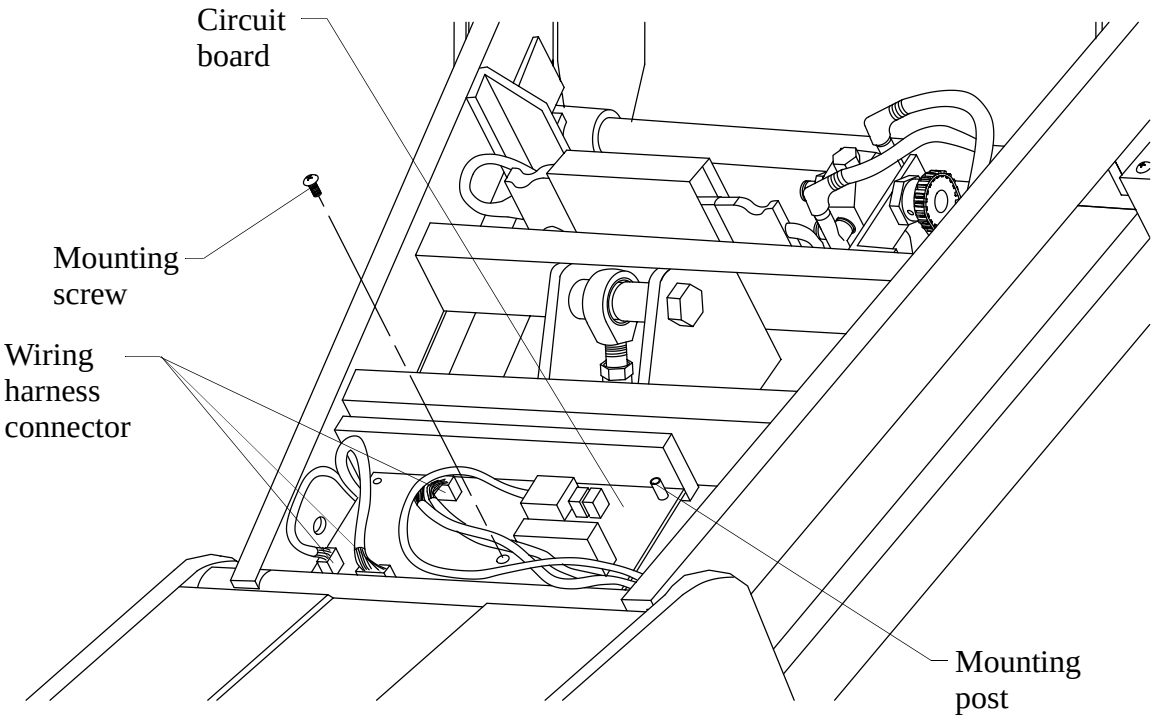
WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

5. Make sure the knee section is completely down. Fold the foot section up and back toward the head end of the bed. Secure the foot section with the foot panel strap.

6. Remove the lift arm cover and two side lift arm covers at the center of the bed.

7. Unplug the wiring harness connectors from the master control board (see figure 4-41 on page 4-90).

Figure 4-41. Master Control Board



8. Remove the mounting screw holding the circuit board in place.

9. There are four mounting posts holding the circuit board to the bed. Using a pliers, depress the retaining tab of each mounting post and lift that corner of the control board past the tab. Remove the control board from the bed.

Replacement

1. Slide the replacement control board down on the four mounting posts. Install the mounting screw.

2. Connect the wiring harness connectors to the control board.

3. Install all of the covers previously removed.

4. Check for proper operation of all of the electrical functions of the bed.

4.38 Automatic Contour Switch

Tools required: Phillips head screwdriver

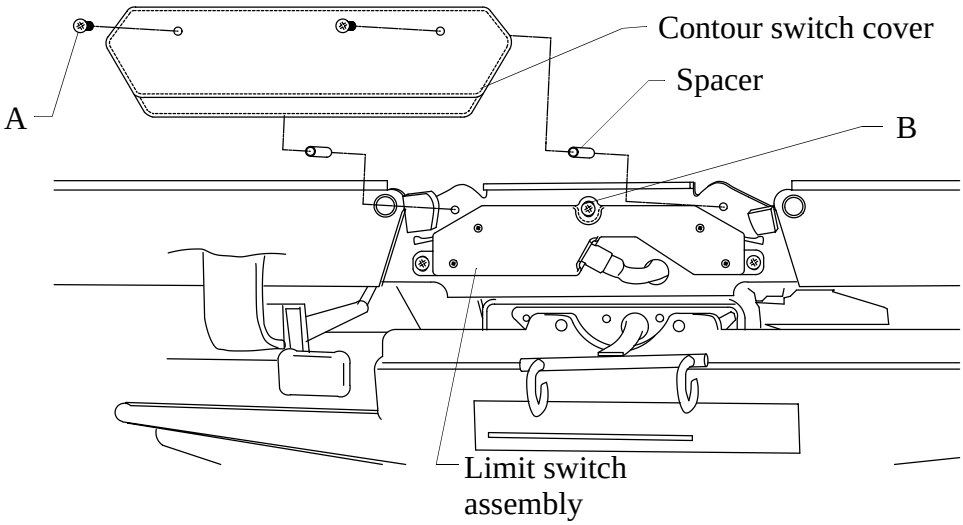
Removal

1. Using the hilow feature, raise the bed to the high position.
2. Lower the head and knee sections to their lowest position.
3. Unplug the unit from its power source.

WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

4. Remove the two screws (A), the spacers, and the contour switch cover (see figure 4-42 on page 4-91).

Figure 4-42. Automatic Contour Switch



5. Remove the three screws (B) and the limit switch assembly.

Replacement

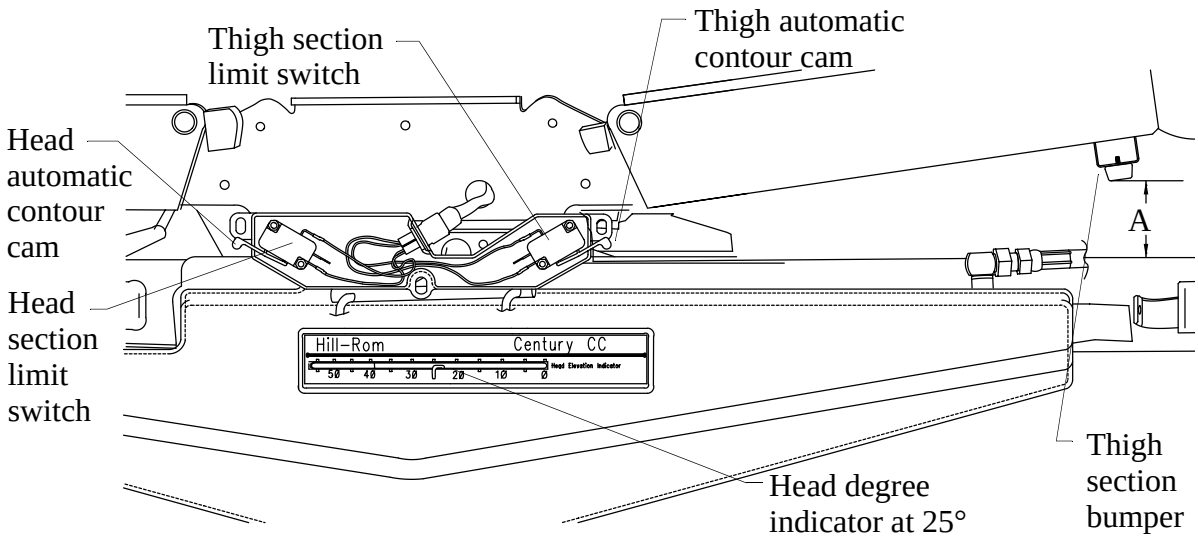
1. Install the replacement limit switch in the limit switch assembly.
2. Install the limit switch assembly to the bed loosely with the three screws (B). Proceed to the “Adjustment” section.

Adjustment

1. Raise the thigh section until the thigh section bumper at (A) is 2 3/8"-2 1/2" (61-63 mm) above the frame channel it rests on (see figure 4-43 on page 4-92).

2. Raise the head section to 25° as read on the head degree indicator.

Figure 4-43. Automatic Contour Switch Adjustment



3. Adjust the thigh section limit switch toward the thigh section until you hear the audible click as the switch actuator is pushed against the thigh automatic contour cam. Tighten the screw at the thigh end of the limit switch housing.

4. Adjust the head section limit switch toward the head section until you hear the audible click as the switch actuator is pushed against the head automatic contour cam. Tighten the screw at the head end of the limit switch housing.

5. Check for proper operation of the automatic contour function. Raise and lower the head section using the siderail controls.

   - When raising the head section, the thigh section should stop moving up when the bumper is 2 1/2" (63 mm) above the channel it rests on.
   - When lowering the head section, the thigh section should start coming down when the head section passes 25°.

4.39 Air Compressor

Tools required: Phillips head screwdriver
E-ring removal tool
11/32" wrench
Wire cutter
Crimping tool

Removal

1. Using the hilow feature, raise the bed to the high position.

2. Lower the head and knee sections to their lowest position. Put the sleep surface in the full Trendelenburg position.

3. Unplug the unit from its power source.

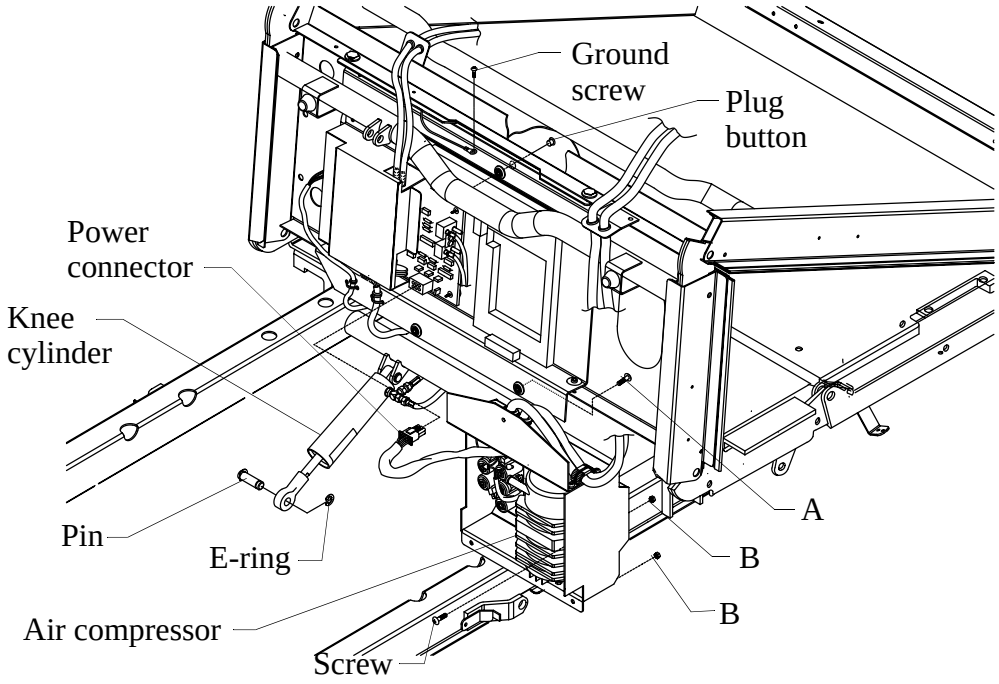
WARNING:
You must unplug the unit from its power source. An electrical shock hazard exists.

4. Remove the DynamicAire Sleep Surface air hoses and remove it from the bed.

5. Fold the foot section up and toward the head end of the bed. Secure the foot section with the foot panel strap.

6. Remove the E-ring and pin connecting the knee cylinder to the knee section (see figure 4-44 on page 4-94). Lay the loose end of the knee cylinder down.

Figure 4-44. Air Compressor



7. Fold the foot and knee sections toward the head end of the bed to the extent of their travel. Secure the foot section with the foot panel strap.

8. Remove the ground screw from the air compressor and manifold cover. Remove the plug button from the top of the knee section (see figure 4-44 on page 4-94).

9. Support the air compressor and manifold assembly. Remove the three screws (A) and four locknuts (B).

10. Disconnect the power connector from the circuit board as follows:
    - Pull the air compressor and manifold cover assembly away from the bed only enough to get access to the power connector.
    - Squeeze the sides of the power connector and disconnect it from the printed circuit board. Carefully move the air compressor and manifold assembly aside.

11. **Early version only**. Remove the four screws and nuts mounting the air compressor to the cover. Cut the two wire joints connecting the air compressor to the wiring harness. Remove the air compressor.

12. **Current version only**. The air compressor is not separately replaceable, but is replaced as an assembly with the compressor pan.

Replacement

1. **Early version only**. Install the replacement air compressor as follows:
   - Connect the white wire from the air compressor to the white wire in the wire assembly.
   - Connect the black wire from the air compressor to the orange wire in the wire assembly.
   - Assemble the air compressor to the cover with the four screws and nuts.
2. Connect the power connector to the circuit board. Install the three screws (A) and the four locknuts (B).
3. Install the plug button and the ground screw.
4. Attach the knee cylinder to the knee section with the pin and E-ring.
5. Install the DynamicAire Sleep Surface on the bed. Connect the air hoses.
6. Check for proper operation of the air system.

4.40 Air Manifold and Solenoid (Early Version)

Tools required: Phillips head screwdriver
E-ring removal tool

Removal

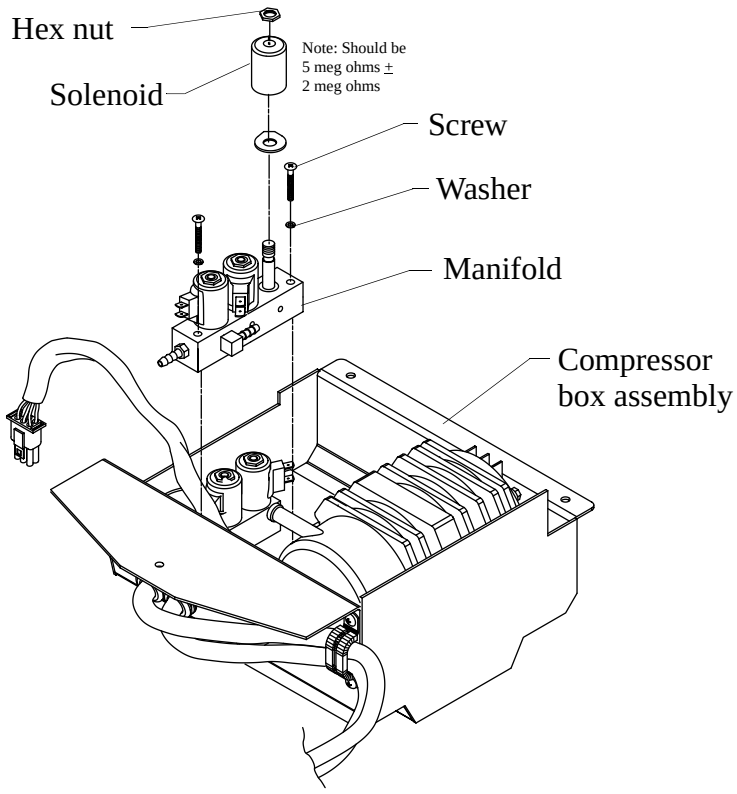
1. Perform step 1 through step 10 of the "Removal" section from "Air Compressor" on page 4-93.

2. If the solenoid only is being removed, proceed to step 6.

3. Remove the two screws that hold the manifold to the compressor box assembly (see figure 4-45 on page 4-96).

4. Remove the electrical connector from the solenoids on the old manifold.

Figure 4-45. Air Manifold and Solenoid (Early Version)



5. Remove the hose clamps and the hoses from the old manifold. Lift the old manifold from the compressor box assembly.

6. Remove the solenoid(s) from the manifold as follows:
   - Remove the hex nut(s) from the top of the solenoid(s).
   - Lift and remove the solenoid(s) from the manifold assembly.

Replacement

1. Install the old or replacement solenoid(s) on the old or replacement manifold. Install the hex nut(s). Torque the hex nut(s) to 15-25 in-lbs (1.7-2.8 N•m).
2. If you only replaced a solenoid, proceed to step 5.
3. Install the hose clamps and the hoses on the manifold. Put the manifold in the compressor box assembly.
4. Install the two screws that hold the manifold to the compressor box assembly.
5. Connect the electrical connectors to the solenoids.
6. Perform step 2 through step 6 of the “Replacement” section from “Air Compressor” on page 4-93.

4.41 Air Control Valve Assembly (Current Version)

Tools required: Phillips head screwdriver
E-ring removal tool

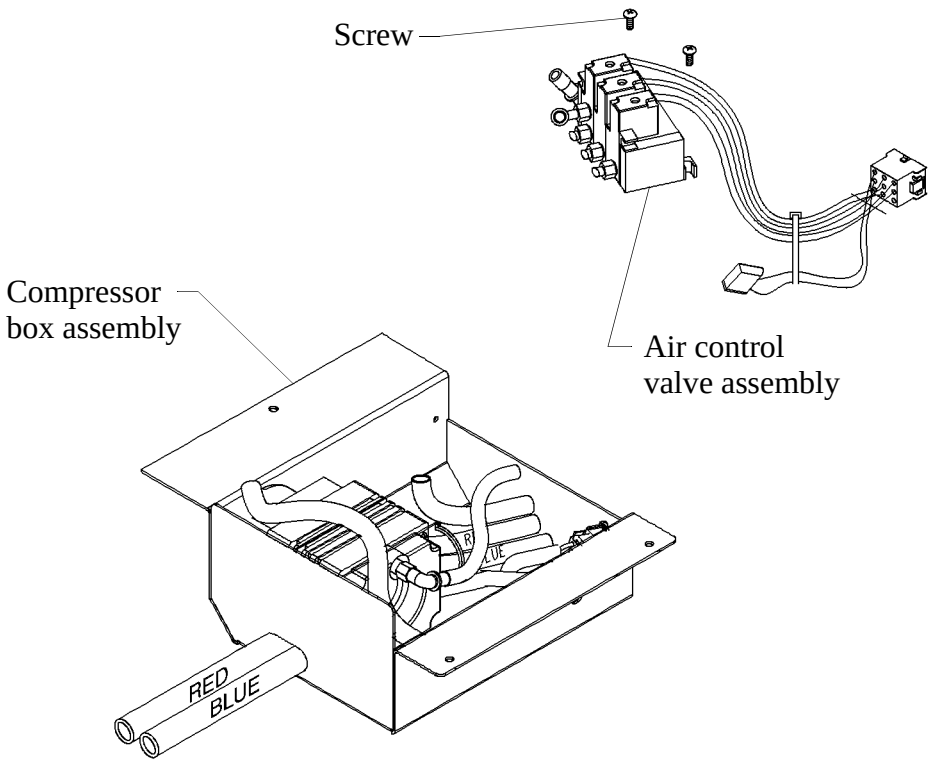
Removal

1. Perform step 1 through step 10 of the "Removal" section from "Air Compressor" on page 4-93.

2. Remove the two screws that hold the control valve assembly to the compressor pan (see figure 4-46 on page 4-98).

3. Disconnect the control valve electrical connector from the air compressor.

Figure 4-46. Air Manifold and Solenoid (Current Version)



4. Remove the hoses from the control valve assembly. Lift the control valve assembly from the compressor pan.

Replacement

1. Install the replacement control valve assembly as follows (see figure 4-46 on page 4-98):
   a. Install the hoses on the control valve assembly.
   b. Connect the electrical connector of the control valve assembly to the air compressor connector.
   c. Put the control valve assembly in the compressor pan. Install the two screws that hold the control valve assembly to the compressor pan.
2. Perform step 2 through step 6 of the “Replacement” section from “Air Compressor” on page 4-93.

4.42 Air System Control Board

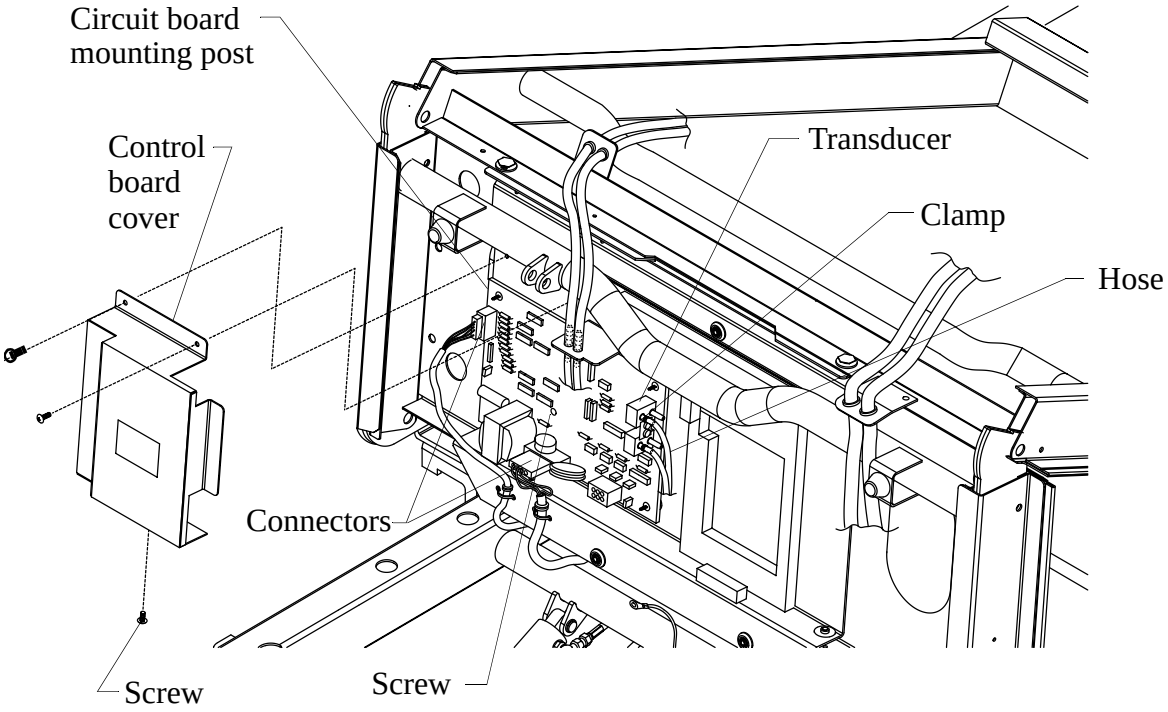
Tools required: Phillips head screwdriver
E-ring removal tool
Needle nose pliers

Removal

1. Perform step 1 through step 10 of the "Removal" section from "Air Compressor" on page 4-93.

2. Remove the three screws that hold the control board cover to the bed (see figure 4-47 on page 4-100).

Figure 4-47. Air System Control Board



3. Disconnect the two electrical connectors from the control board.

CAUTION:
Do not twist or bend the hose when removing it from the transducer. This can damage the transducer.

4. Remove the hose clamps and hoses from the two transducers located on the control board.

5. Remove the screw holding the control board to the bed. Using a pliers, compress the tabs on the circuit board mounting posts and remove the control board from the bed.

Replacement

1. Install the replacement control board on the mounting posts. Push the control board down below the locking tabs of the mounting posts.

2. Install the mounting screw in the control board.

CAUTION:
Do not twist or bend the hose when connecting it to the transducer. This can damage the transducer.

3. Install the hoses and hose clamps on the transducers

4. Connect the two electrical connectors to the control board.

5. Install the control board cover to the bed with the three screws.

6. Perform step 2 through step 6 of the "Replacement" section from "Air Compressor" on page 4-93.

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Chapter 5
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5

Warranty

Hill-Rom®

A Hillenbrand Industry

LIMITED WARRANTY

Hill-Rom has a long tradition of providing superior quality products and service to our customer. Our goal is "Total Customer Satisfaction." In that spirit, Hill-Rom is proud to offer the following warranty.

GENERAL WARRANTY:

Hill-Rom warrants to the original purchaser that its products shall be free from defects in material and workmanship for a period of one (1) year after date of delivery. Hill-Rom's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of Hill-Rom, found to be defective. In addition to the foregoing one year warranty, Hill-Rom warrants to the original purchaser that the frame and welds on its beds will be free from structural defects for the life of the bed. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PURPOSE. HILL-ROM'S OBLIGATION UNDER THESE WARRANTIES SHALL NOT INCLUDE ANY LIABILITY FOR LOSS OF PROFITS, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAYS. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply. If requested by Hill-Rom, products or parts for which a warranty claim is made shall be returned prepaid to Hill-Rom's factory. Any improper or negligent use, any alterations or repairs not in accordance with Hill-Rom's manuals or performed by others in such manner as in Hill-Rom's judgement affects the product materially and adversely, shall void these warranties. No employee or representative of Hill-Rom is authorized to change these warranties in any way or grant any other warranty. These warranties shall not apply outside the United States. These warranties provide specific legal rights; however, there may be other available rights, which vary from state to state.

PART AVAILABILITY POLICY: Hill-Rom will supply parts for new products for fifteen (15) years from date of last manufacture, and on remanufactured products for ten (10) years from date of sale.

OUT OF WARRANTY EXCHANGE POLICY: After the expiration of the original warranty, upon request, Hill-Rom will ship as a replacement, rebuilt electric motors, control boards, and air compressors for like units returned to Hill-Rom by the original purchaser for forty percent (40%) of the then-current new price. The exchange price is a substantial savings to the hospital as compared to the price of a new motor, control boards, and air compressors. The replacement motors, control boards and air compressors will carry a new one (1) year parts warranty.

SPECIFIC WARRANTIES:

MATTRESS WARRANTIES:

DYNAMICAIRE™ SLEEP SURFACE: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. After the expiration of this warranty, the surface components may be purchased at 50% of the then-current price during the third, fourth and fifth years after date of delivery.

(Continued)

COMFORTLINE® MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. After the expiration of this warranty, the mattress components may be purchased at 50% of the then-current price during the third, fourth and fifth years after date of delivery.

ZONEAIRE™ SLEEP SURFACE: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. After the expiration of this warranty, the surface components may be purchased at 50% of the then-current price during the third, fourth and fifth years after date of delivery. Electro mechanical components (compressor, valves, printed circuit boards, hoses and couplers) are warranted to be free from defects in material and workmanship for a period of one (1) year from date of delivery.

INNERSPRING MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for the following specified periods from date of delivery. SureRest® III: Twelve (12) year prorated warranty; SureRest II: Ten (10) year prorated warranty; SureRest I: Five (5) year prorated warranty.

PERINATAL MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of one (1) year, when used with proper draping practices, from date of delivery.

FOAM MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery.

COMPOSER™ COMMUNICATION SYSTEM WARRANTIES:

COMPOSER HARDWARE WARRANTIES: Hill-Rom warrants to the original purchaser that the hardware components of the COMposer shall be free from defects in material and workmanship for a period of one (1) year after the date of system certification. Hill-Rom's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of Hill-Rom, found to be inoperable.

COMPOSER SOFTWARE WARRANTIES: Hill-Rom warrants to the original purchaser that the physical diskettes on which COMposer system software is distributed shall be free from defects in material and workmanship for a period of sixty (60) days from the date of delivery. The entire and exclusive remedy available to the purchaser under this warranty is limited to replacement of inoperable diskettes and shall not extend to any claim for or right to recover any damages, including but not limited to, loss of profit, data or use of the software, or special, incidental or consequential damages, or other similar claims.

COMPOSER EXPENDABLES WARRANTIES: Hill-Rom warrants for sixty (60) days the expendable parts such as locator badge batteries and dome light incandescent bulbs.

OTHER WARRANTIES:

EXPENDABLES WARRANTIES: A sixty (60) day limited warranty applies to expendable parts such as overhead fluorescent tubes, heating elements and temperature probes.

UPGRADE KIT WARRANTIES: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of one (1) year from date of delivery. The warranty on existing product is not affected. A Product Assurance and/or Preventive Maintenance contract will be offered at the time of installation for a pre-determined fee. This will act to advise the customer of the condition of Hill-Rom products being upgraded along with specific parts and PM recommendations.

FOR PARTS AND SERVICE UNDER THESE WARRANTIES: Call Hill-Rom Technical Support Department at (800) 445-3720, Monday through Friday. In order to expedite service, we request you furnish the following information: customer identification number, product model number, serial number, and description of problem. A qualified Specialist will provide, via telephone, troubleshooting assistance for hospital personnel and provide necessary parts to make repairs. If telephone troubleshooting determines the need for on-site technical service, a qualified Territory Service Representative will be dispatched. Replacement of non-technical items will be the responsibility of the customer. These warranties do not cover failures due to misuse, abuse, neglect or lack of routine maintenance, which are the responsibility of the owner.

Revised November 1, 1995

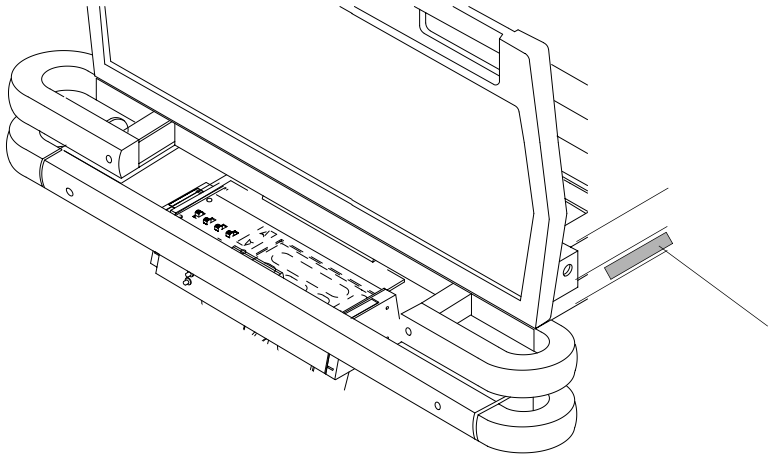
Ordering Service Parts

Use the parts lists in this service manual to identify the part numbers you require.

Call your Technical Customer Support Specialist at the Hill-Rom Technical Support Department—phone (800) 445-3720. To help expedite the processing of your parts order, please have your six-digit customer account number, purchase order number, product number, and serial number available for the Technical Customer Support Specialist when you call.

NOTE:
You will find the product number and serial number on the product identification label (see figure 5-1 on page 5-5).

Figure 5-1. Location of Identification Label



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For your convenience, Hill-Rom provides a telefax number to promptly order parts, request part prices and availability, or to follow up on a service order. The telefax number is (812) 934-8472.

We suggest a minimum of $40.00 when placing orders for service parts. This will help prevent an increase in the cost of processing your service order.

Terms:

- Net 30 days.
- F.O.B. Batesville, Indiana.
- Shipping charges are prepaid and added to the invoice.
- All service orders are shipped UPS ground, unless you specifically request an alternative method.

Address all inquiries to:

Hill-Rom Company
1069 State Route 46 E
Batesville, Indiana 47006-9167
Attention: Technical Support—Parts

Address all return goods to:

Hill-Rom Company
Distribution Center Door D23
County Road 300E
Batesville, Indiana 47006-9167
Attention: Service Stores

NOTE:
To eliminate possible delays or incorrect billings, **do not** return any items without a Return Material Authorization (RMA) number. A Return Material Authorization packet is included with each order when a return is requested. This packet includes an RMA number, instructions, and a shipping label. If misplaced, obtain an RMA number by phoning the Hill-Rom Technical Support Department at (800) 445-3720.

Exchange Policy

The following are Hill-Rom's policies for in-warranty and out-of-warranty exchanges.

In-Warranty Exchanges

Hill-Rom will request that parts/products be returned for inspection in some cases. When this occurs, you are expected to return parts/products within 30 days. If you fail to return the inoperative parts/products within the 30 day period, Hill-Rom will invoice your facility for the full selling price of the parts/products.

NOTE:
The preceding billing procedure **only** pertains to parts/products that Hill-Rom requests to be returned.

In some cases, the invoice sent with the parts will show the full selling price of the parts. This is for Hill-Rom's internal use only and should not be confused with the price you will actually pay.

Please do not return any parts without an RMA number. Hill-Rom will include a Return Material Authorization packet with the parts/products shipment when parts/products have been requested to be returned. If misplaced, obtain an RMA number by phoning the Hill-Rom Technical Support Department at (800) 445-3720.

Out-of-Warranty Exchanges

You are expected to return the inoperative parts/product to Hill-Rom within 30 days. Hill-Rom will include a Return Material Authorization packet with the parts/products shipment. If misplaced, obtain an RMA number by phoning the Hill-Rom Technical Support Department at (800) 445-3720. If you fail to return the equipment within thirty days, Hill-Rom will invoice your facility for **the difference between the exchange price and the new price of the part**.

Recommended Spare Parts

Following is a list of recommended spare parts for the Century CC Bed. The quantities are adequate for servicing ten beds or more.

Table 5-1. Recommended Spare Parts

Part Number	Quantity	Description
44160 (892)	1	Power unit and hose assembly (current version)
39408 (892)	1	Pump assembly
35641 (892)	1	Steer pedal
35642 (892)	1	Brake pedal
35663 (892)	4	Circuit board support
35711 (892)	2	Indicator housing
35712 (892)	2	Indicator wheel
42754 (892)	1	Lift cover
35730 (892)	1	Top cover—foot end
35731 (892)	1	Foot cover—rh
35732 (892)	1	Foot cover—lh
35733 (892)	1	Manifold cover
35734 (892)	1	Side cover—rh
35735 (892)	1	Side cover—lh
41700 (892)	1	Drive belt
45975 (892)	1	CPR valve
35786 (892)	1	Manual release valve
45974 (892)	1	Manual cylinder
35788 (892)	1	Manual selector valve
45970-01 (892)	1	Hilow cylinder
35802 (892)	1	Gas cylinder assembly—rh head
35803 (892)	1	Gas cylinder assembly—lh head
44574 (892)	1	Gas cylinder assembly—rh foot
44575 (892)	1	Gas cylinder assembly—lh foot
36275 (892)	2	P.C. board assembly
36199S (892)	4	Hydraulic oil (quarts)
SA1484 (892)	1	Caster—total lock and steer
SA1483 (892)	3	Caster—total lock
36867 (892)	1	Coil cover
37473 (892)	1	Manifold valve—up
37474 (892)	1	Manifold valve—down, head
37476 (892)	1	Manifold valve—down, knee
37478 (892)	1	Manifold valve—down, hilow

Part Number	Quantity	Description
37479 (892)	1	Solenoid
SA1364 (892)	2	Pedal pad assembly—up
SA1365 (892)	2	Pedal pad assembly—down
37925 (892)	1	In-line filter assembly
45973 (892)	1	Head cylinder assembly—lh
45972 (892)	1	Head cylinder assembly—rh
45971 (892)	1	Knee cylinder assembly
38081 (892)	1	Snap-in switch
46959 (892)	1	Motor power switch label
38094 (892)	2	Selector dial
38126 (892)	2	Selector knob
38135 (892)	4	Knob assembly
38324 (892)	2	CCU index plate
38621 (892)	4	Spring clip
38960 (892)	1	Storage clip
87V035S (892)	1	Motor assembly
SA1503 (892)	1	Pulleys, belts, and screws
82W102S (892)	2	Hilow switch
82W103S (892)	2	Head switch
82W104S (892)	2	Knee switch
19562 (892)	10	Latch cover
29788 (892)	20	Twist nut
35207 (892)	1	End cane
35212 (892)	1	Top cane
35206 (892)	1	Control housing cover
38827 (892)	1	Light neutral touch-up paint (aerosol can)
38587 (892)	1	Dark neutral touch-up paint (aerosol can)
35642-60 (892)†	1	Brake pedal
90229-15 (892)†	1	Caster—total lock and steer
90229-14 (892)†	3	Caster—total lock
SA1365-60 (892)†	2	Pedal pad assembly—down

Part Number	Quantity	Description
38081-02 (892)†	1	Snap-in switch
43605-22 (892)†	2	4.0 Amp fuses

† These parts are unique to European applications.

Table 5-2. Recommended Spare Parts for the Scale System

Part Number	Quantity	Description
48357 (892)	1	Scale unit (current version)
36735 (892)	1	Scale cable assembly
37340 (892)	1	Scale interconnect cable assembly

Table 5-3. Recommended Spare Parts for the Air System

Part Number	Quantity	Description
46752 (892)	1	Control board assembly
SA4642 (892)	1	Ticking—P913C
SA7109 (892)	1	Top foam and ticking—P914C
38187 (892)	2	Bed quick coupling—male, small
38189 (892)	2	Bed quick coupling—male, large
39024 (892)	2	Bed quick coupling—female, large
39027 (892)	2	Bed quick coupling—female, small
SA4461 (892)	2	Sleep surface quick coupling—male
SA4462 (892)	2	Sleep surface quick coupling—female
SA4463 (892)	2	Sleep surface quick coupling—male
SA4464 (892)	2	Sleep surface quick coupling—female

Table 5-4. Recommended Spare Parts by Siderail Option

Siderail Option Number	Part Number	Quantity	Description
50, 60	None	None	None

Siderail Option Number	Part Number	Quantity	Description
51	44647 (892)	1	SideCom junction box
	28509 (892)	1	Nurse call switch—rh
	28508 (892)	1	Nurse call switch—lh
52	44647 (892)	1	SideCom junction box
	28509 (892)	1	Nurse call switch—rh
	28508 (892)	1	Nurse call switch—lh
	42906 (892)	1	Communications housing assembly
	42684 (892)	10	Volume knob
53, 63	44647 (892)	1	SideCom junction box
	28509 (892)	1	Nurse call switch—rh
	28508 (892)	1	Nurse call switch—lh
	42906 (892)	1	Communications housing assembly
	42684 (892)	10	Volume knob
	28506 (892)	1	Lighting module—lh
	28507 (892)	1	Lighting module—rh
59	None	None	None

Base Assembly

Figure 5-2. Base Assembly

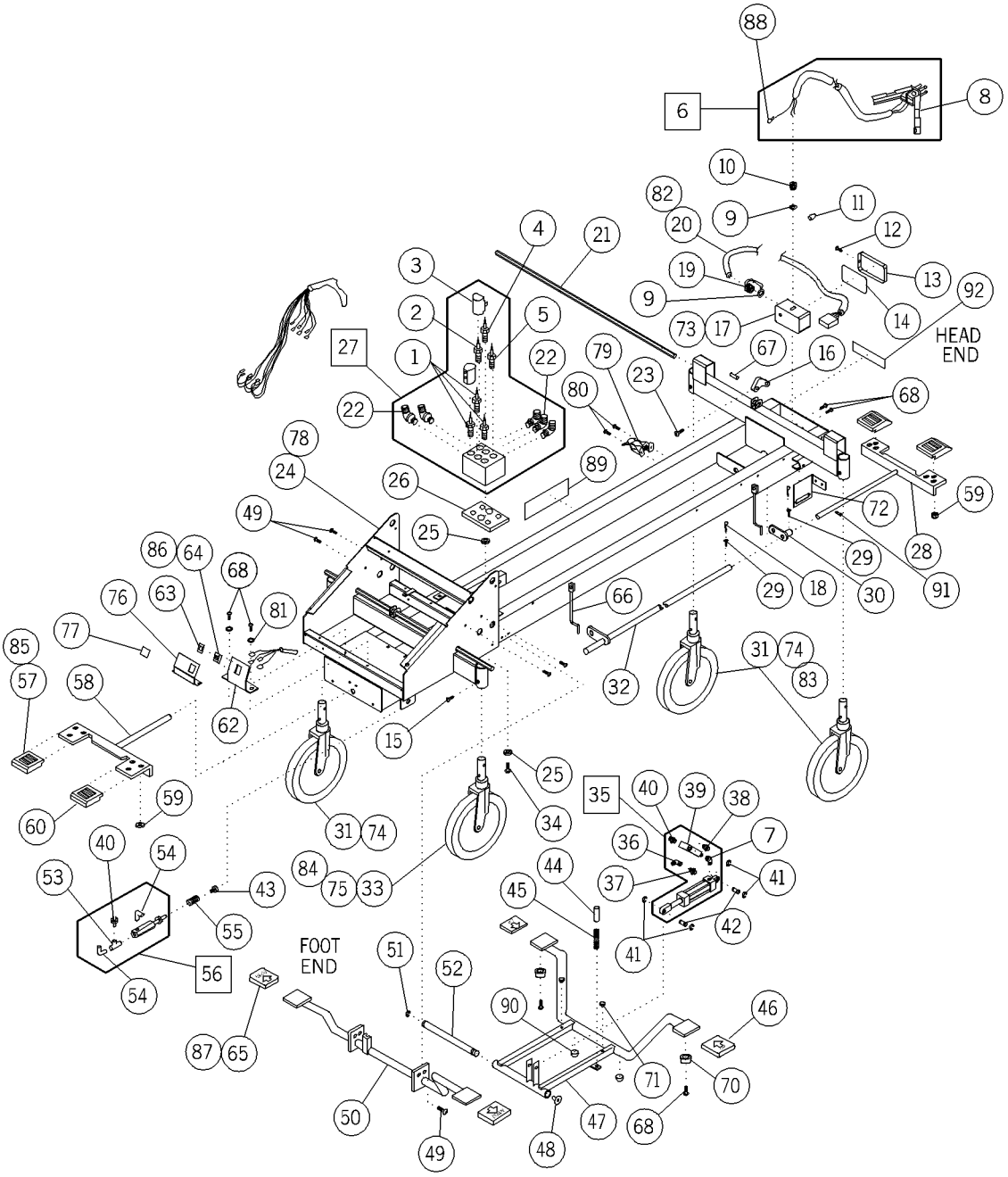

Table 5-5. Base Assembly

Item Number	Part Number	Quantity	Description
1	37473 (892)	3	Manifold valve—up
2	37474 (892)	1	Manifold valve—down, head
3	37479 (892)	6	Coil
4	37476 (892)	1	Manifold valve—down, knee
5	37478 (892)	1	Manifold valve—down, hilow
6	35449 (892)	1	Cord set assembly
7	42366 (892)	1	45 degree fitting
8	27518 (892)	1	Plug cord
9	22320 (892)	2	Gasket strain relief
10	16145 (892)	1	Strain relief
11	32741 (892)	1	Wire joint
12	22605 (892)	2	Screw
13	22319 (892)	1	Box cover
14	22318 (892)	1	Rubber gasket
15	43087 (892)	8	Screw
16	40676 (892)	2	Rocker link
17	35693 (892)	1	Junction box
18	11873 (892)	2	Roll pin retainer
19	35773 (892)	1	Strain relief
20	35502 (892)	1	Power cord assembly
21	35671 (892)	2	Brake hex rod
22	35736 (892)	5	Elbow
23	16042 (892)	2	Screw
24	43496-48 (892)	1	Base assembly (early version)
25	35665 (892)	8	Washer
26	35460 (892)§	1	Manifold mounting plate
27	35792-48 (892)	1	Manifold assembly
28	35678 (892)§	1	Head end pedal assembly
29	142 (892)	2	Roll pin
30	35419 (892)§	1	Link assembly
31	SA1483 (892)	3	Brake caster—Tente urethane taupe (8")
32	35424 (892)§	1	Torque tube assembly
33	SA1484 (892)	1	Brake/steer—Tente (8 " caster)

Item Number	Part Number	Quantity	Description
34	15338 (892)	4	Screw
35	45974 (892)	1	Manual pump assembly
36	35746 (892)	1	Female elbow
37	35719 (892)	2	In-line check valve
38	36210 (892)	1	Male connector
39	SA4624 (892)	1	Relief valve assembly (manual pump)
40	36182 (892)	2	Male connector
41	35326 (892)	4	E-ring
42	35564 (892)	2	Clevis pin
43	36722 (892)	1	Compression spring
44	36171 (892)	2	Tube
45	36170 (892)	2	Spring
46	SA1364 (892)	2	Up foot pedal with tape
47	42940 (892)§	1	Pump pedal assembly
48	42941 (892)	2	Flange bushing
49	34606 (892)	4	Screw
50	44745 (892)§	1	Release pedal assembly
51	19678 (892)	2	Tru-arc ring
52	35553 (892)	1	Clevis pin
53	35748 (892)	1	Street tee
54	35745 (892)	2	Male elbow
55	35994 (892)	1	Spring
56	35786 (892)	1	Manual release valve
57	35642 (892)	2	Brake pedal
58	35638 (892)§	1	Pedal assembly—foot end
59	29788 (892)	12	Twistnut
60	35641 (892)	2	Steer pedal
61			
62	36077 (892)§	1	Mounting bracket—L/O switch (early version)
63	38082 (892)	1	Motor power switch label (early version)
64	38081 (892)	1	Snap-in switch
65	SA1365 (892)	2	Down foot pedal with tape

Item Number	Part Number	Quantity	Description
66	35439 (892)	2	Connecting rod
67	27509 (892)	2	Roll pin
68	18921 (892)	6	Screw
69			
70	33603 (892)	2	Bumper
71	35706-48 (892)	2	Bumper
72	36667 (892)§	1	Connector bracket
73	35757 (892)	1	Junction box—isolation transformer
74	SA1622 (892)	3	Brake—6" caster
75	SA1621 (892)	1	Brake/steer—6 " caster
76	43824 (892)	1	Mounting bracket lockout switch (current version)
77	46959 (892)	1	Motor power switch label
78	42292 (892)	1	Base assembly (current version)
79	36165 (892)	2	IV clamp (with screws)
80	90235-06 (892)	4	Screw
81	23208 (892)	2	Lockwasher
82	43769-05 (892)†	1	Dutch plug and cord
83	90229-14 (892)†	3	Total lock caster—8" (conductive)
84	90229-15 (892)†	1	Total lock and steer caster—8" (conductive)
85	3564260 (892)†	2	Brake pedal
86	38081-02 (892)†	1	Snap-in switch
87			
88	25647 (892)	1	Terminal
89	44089 (892)	1	Intl. IV Storage Label
90	43971 (892)	2	Bumpon (use with 6" casters)

Item Number	Part Number	Quantity	Description
91	42006 (892)	2	Screw lock
92	34810 (892)	1	Ground receptacle label

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

† These parts are unique to European applications.

NOTES:

Motor and Lift Arm Assembly

Figure 5-3. Motor and Lift Arm Assembly

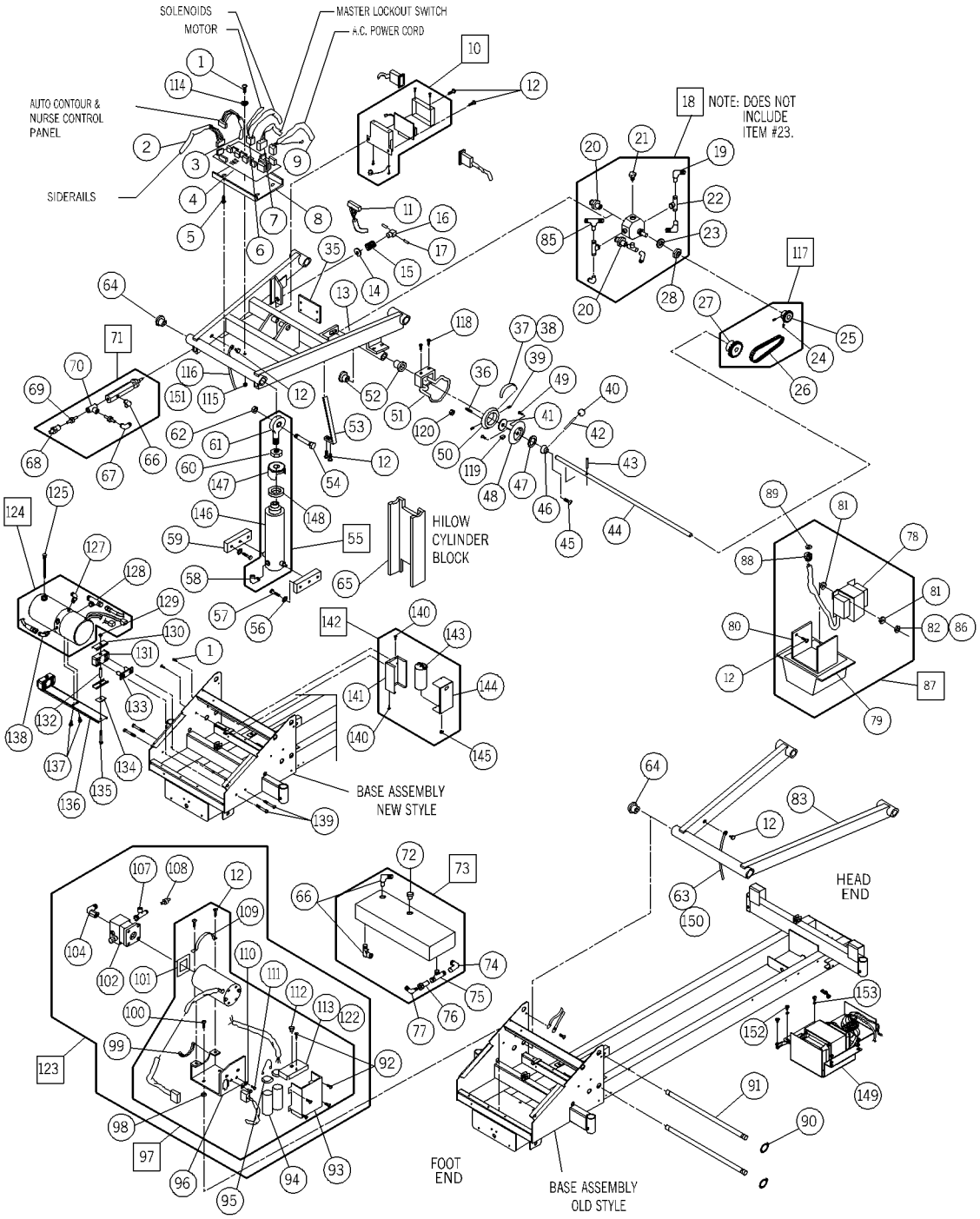

Table 5-6. Motor and Lift Arm Assembly

Item Number	Part Number	Quantity	Description
1	15338 (892)	3	Screw
2	35503 (892)	1	Siderail control cable
3	35438 (892)	1	Nurse control cable
4	36275 (892)	1	Control board assembly
5	35663 (892)	4	Standoff
6	35412 (892)	1	Motor/solenoid cable
7	35420 (892)	1	Master lockout switch cable
8	35622 (892)	1	Insulator
9	35502 (892)	1	Power cord assembly
10	44647 (892)	1	Junction box assembly
11	36654-48 (892)	1	SideCom cable assembly
12	18921 (892)	6	Screw
13	42925 (892)§	1	Lift frame
14	35686 (892)	1	Washer
15	35994 (892)	1	Spring
16	36146 (892)	1	Release bracket
17	90272-05 (892)	2	Screw
18	35788 (892)	1	Selector valve assembly
19	35740 (892)	4	Male elbow
20	36183 (892)	2	Male connector
21	35741 (892)	1	Plug
22	36184 (892)	3	Male branch tee
23	36246 (892)	1	Washer
24	90291-04 (892)	4	Barrel clamp setscrew
25	41699 (892)	1	Drive belt pulley
26	41700 (892)	1	Drive belt
27	41698 (892)	1	Drive belt pulley
28	SA4580 (892)	1	Selector valve hex nut
29			
30			
31			
32			
33			

Item Number	Part Number	Quantity	Description
34			
35	42738 (892)	1	Combox bracket
36	35764 (892)	2	Spring plunger
37	44086 (892)	1	Intl. function label—lh
38	44085 (892)	1	Intl. function label—rh
39	90272-10 (892)	4	Screw
40	36284 (892)	2	Selector ball
41	38324 (892)	2	CCU index plate
42	36283 (892)	2	Selector level
43	12434 (892)	1	Roll pin
44	SA1261 (892)	1	Selector shaft with roll pin
45	90093-16 (892)	2	Screw
46	38126 (892)	2	Selector knob
47	44084 (892)	2	Intl. manual control label
48	38094 (892)	2	Selector dial
49	371 (892)	4	Screw shim
50	35602 (892)	2	Selector housing
51	35973 (892)	2	Guard
52	42941 (892)	4	Flange bushing
53	36781-48 (892)	1	Trendelenburg limit cable bracket
54	42481 (892)	1	Bolt
55	4597001 (892)	1	Hilow cylinder assembly
56	36185 (892)	4	Lockwasher
57	90017-20 (892)	4	Screw
58	35736 (892)	1	Elbow
59	35571 (892)	2	Cylinder retainer
60	35810 (892)	1	Jam hex nut
61	35603 (892)	1	Rod end
62	42482 (892)	1	Nut
63	28629 (892)	1	Ground strap assembly
64	36615 (892)	4	Pivot bushing
65	87V287S (892)	AR	Hilow cylinder block
66	35745 (892)	1	Male elbow
67	35746 (892)	1	Female elbow

Item Number	Part Number	Quantity	Description
68	35743 (892)	1	Female connector
69	35719 (892)	2	Check valve—in-line
70	35748 (892)	1	Street tee
71	45975 (892)	1	CPR valve assembly
72	35750 (892)	1	Breather cap
73	36181 (892)	1	Tank complete (early version)
74	36209 (892)	1	Elbow
75	35742 (892)	1	Male pipe tee
76	35720 (892)	1	In-line filter
77	36211 (892)	1	Elbow
78	37353 (892)	1	Transformer assembly
79	35729 (892)	1	Isolation transformer cover
80	41537 (892)	1	Isolation transformer bracket
81	35665 (892)	2	Washer
82	755 (892)	1	Locknut
83	35437-48 (892)	1	Lower lift frame
84			
85	35739 (892)	1	Male branch tee
86	752 (892)	1	Screw
87	35475 (892)	1	Transformer with power cord
88	16145 (892)	1	Strain relief
89	22320 (892)	1	Strain relief gasket
90	35578 (892)	4	Retaining ring
91	35425 (892)	2	Lift pin
92	22605 (892)	5	Screw
93	36670 (892)	1	Capacitor cup
94	40435 (892)	2	Capacitor—25.0 UFD
95	33872 (892)	2	End cap
96	35457-48 (892)	1	Bracket
97	87V035S (892)	1	Motor assembly
98	36745 (892)	4	Plastic grommet
99	35591 (892)	1	Rubber strip
100	18252 (892)	4	Screw
101	SA4218 (892)	1	Motor/pump gasket

Item Number	Part Number	Quantity	Description
102	39408 (892)	1	Pump assembly
103			
104	36212 (892)	1	Straight thread elbow (inlet port)
105			
106			
107	37024 (892)	1	Tee (outlet port)
108	37025 (892)	1	Magnetic pipe plug
109	35461-48 (892)	1	Clamp
110	92 (892)	2	Lockwasher
111	9936 (892)	2	Hex bolt
112	17410 (892)	1	Snap bushing
113	36671-48 (892)	1	Capacitor lid
114	23208 (892)	1	Lockwasher
115	35511 (892)	1	Rivnut
116	4565810 (892)	1	Ground strap assembly
117	SA1503 (892)	1	Sprockets, belt, and set screws
118	90245-06 (892)	4	Screw
119	36754 (892)	2	Woodruff key
120	20802 (892)	2	Keps nut
121			
122	34811 (892)	1	Caution label
123	39409-48 (892)	1	Motor and pump (early version)
124	44160 (892)	1	Power unit and hose assembly (current version)
125	SA4913 (892)	1	Dipstick
126			
127	35736 (892)	1	Elbow
128	42293 (892)	1	Straight thread tee fitting
129	831 (892)	2	Locknut
130	29389 (892)	4	Motor mount channel
131	29396 (892)	2	Resilient motor mount
132	29411 (892)	2	Spacer
133	42296 (892)	2	Isolator bushing
134	42367 (892)	2	Spacer
135	90016-40 (892)	2	Bolt

Item Number	Part Number	Quantity	Description
136	42295 (892)	1	Plate—formed
137	90016-10 (892)	2	Bolt
138	36212 (892)	1	Straight thread elbow
139	90018-12 (892)	4	Bolt
140	12595 (892)	2	Screw
141	42298 (892)	1	Box—capacitor
142	42514 (892)	1	Capacitor box assembly
143	42301 (892)	1	Capacitor
144	42299 (892)	1	Lid—capacitor box
145	4435 (892)	1	Locknut
146	45987 (892)	1	Hilow cylinder assembly
147	43428 (892)	1	Hilow cylinder cap
148	43425 (892)	1	Hilow cylinder felt
149	44377 (892)†	1	Transformer mounting assembly—240V
150	39240-06 (892)†	1	Ground strap assembly
151	3924007 (892)†	1	Ground strap assembly
152	18921 (892)†	5	Screw
153	15907 (892)†	4	Lockwasher

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

† These parts are unique to European applications.

Main Frame Assembly

Figure 5-4. Main Frame Assembly

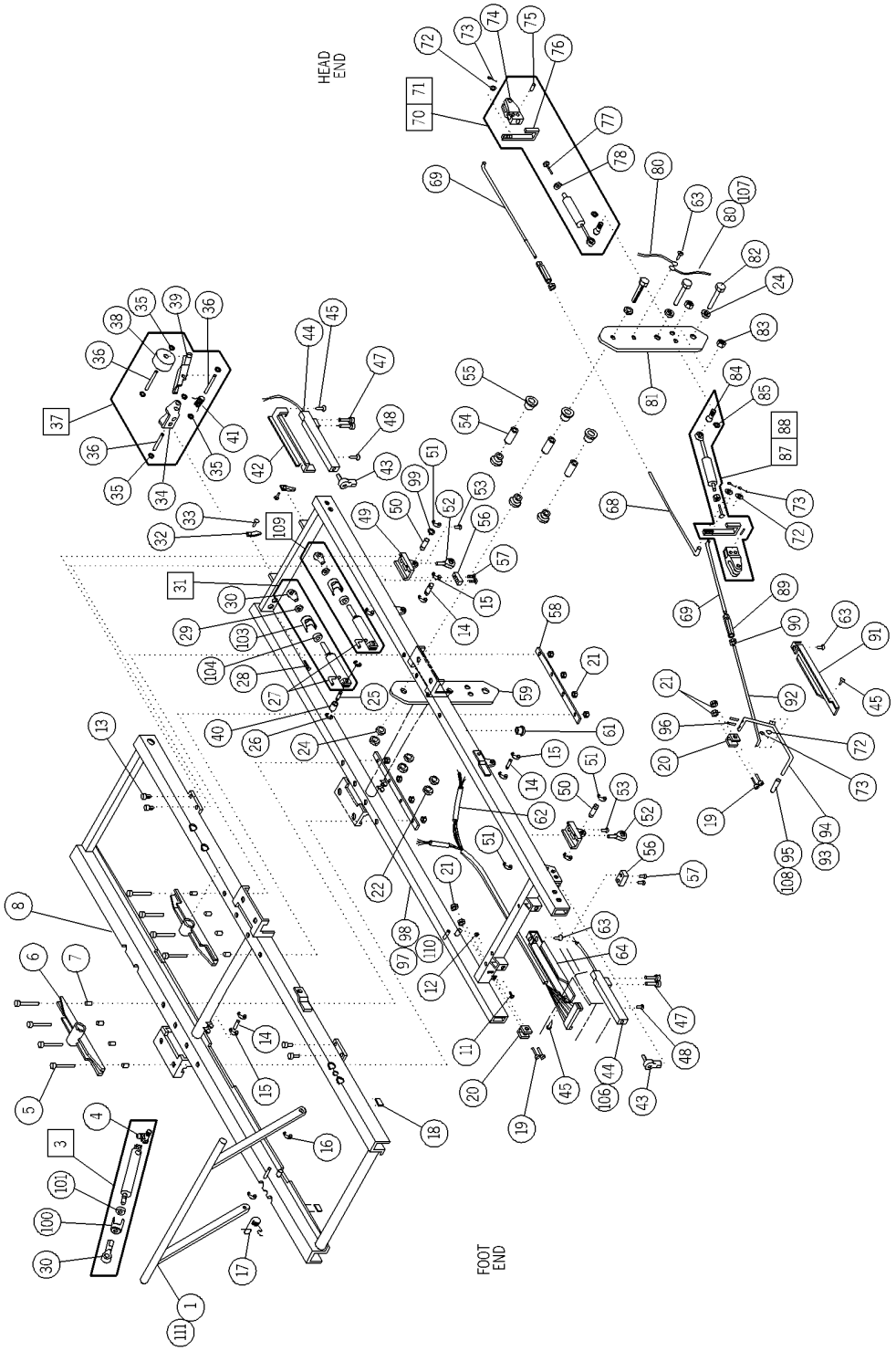

Table 5-7. Main Frame Assembly

Item Number	Part Number	Quantity	Description
1	35257 (892)	1	Foot rack assembly
2			
3	45971 (892)	1	Knee cylinder assembly
4	35738 (892)	1	Straight thread tee
5	90018-48 (892)	8	Screw
6	35952-50 (892)	2	Pivot bracket assembly
7	36142 (892)	8	Spacer
8	46784S-50 (892)	1	Weight frame assembly
9			
10			
11	90018-12 (892)	2	Bolt
12	91 (892)	2	Nut
13	90233-10 (892)	16	Bolt
14	35452 (892)	5	Clevis pin
15	35326 (892)	10	E-ring
16	35482 (892)	2	E-ring
17	35410 (892)	1	Foot rack rh spring
18	36443 (892)	8	Pad
19	90018-24 (892)	4	Screw
20	35606 (892)	2	Mounting bracket
21	4435 (892)	12	Locknut
22	9428 (892)	6	Nut
23			
24	4540 (892)	12	Washer
25	35451 (892)	2	Clevis pin
26	35325 (892)	4	E-ring
27	38770 (892)	2	Elbow
28	90016-24 (892)	4	Bolt
29	36395 (892)	2	Jam nut
30	35336 (892)	3	Rod end—female
31	45972 (892)	1	Head cylinder assembly—rh
32	38621 (892)	1	Spring clip
33	393 (892)	1	Screw

Item Number	Part Number	Quantity	Description
34	36100-50 (892)	2	Bumper yoke
35	25210 (892)	12	Pushnut
36	25208 (892)	6	Axle
37	36005-50 (892)	2	Roller bumper assembly
38	34557-50 (892)	2	Roller bumper
39	36254-50 (892)	2	Roller bumper bracket
40	36707 (892)	2	Bushing
41	35863 (892)	2	Spring
42	36433 (892)	2	Wire routing bracket
43	36680 (892)	4	Rod end
44	44800 (892)	4	Load beam
45	12595 (892)	4	Screw
46			
47	90244-16 (892)	8	Bolt
48	90093-16 (892)	4	Screw
49	36285 (892)	4	Pivot bracket
50	36290 (892)	4	Pivot shaft
51	18890 (892)	8	Tru-arc ring
52	36291 (892)	4	Rod end
53	90237-10 (892)	4	Screw
54	35443 (892)	6	Pivot pin
55	36615 (892)	12	Pivot bushing
56	35970 (892)	2	Bumper
57	90056-08 (892)	8	Screw
58	35847-50 (892)	4	Support plate
59	35442-48 (892)	2	Inner pivot plate
60			
61	24925 (892)	2	Bushing
62	35438 (892)	1	Nurse control cable
63	18921 (892)	3	Screw
64	36430-50 (892)	1	Wire cover—rh
65			
66			
67			

Item Number	Part Number	Quantity	Description
68	35724 (892)	2	Rod—head end
69	35991 (892)	2	Rod—foot end
70	35803 (892)	1	Gas cylinder lh—head
71	35802 (892)	1	Gas cylinder rh—head
72	2449 (892)	8	Washer
73	20517 (892)	8	Cotter pin
74	38741 (892)	4	Gas spring release
75	9685 (892)	4	Roll pin
76	35723 (892)	4	Release lever
77	42508 (892)	4	Pin
78	36256 (892)	4	Nut
79			
80	28629 (892)	2	Ground strap assembly
81	35933-48 (892)	2	Outer pivot plate
82	90017-68 (892)	6	Bolt
83	36727 (892)	4	Nut
84	38052 (892)	4	Ball stud
85	38262 (892)	4	Safety spring
86			
87	44575 (892)	1	Gas cylinder assembly lh—foot
88	44574 (892)	1	Gas cylinder assembly rh—foot
89	36126 (892)	4	Turnbuckle
90	23 (892)	4	Nut
91	36429-50 (892)	1	Wire cover—lh
92	36125 (892)	4	Short release rod
93	35597-33 (892)	1	Trendelenburg handle assembly—lh
94	35598-33 (892)	1	Trendelenburg handle—rh
95	39723 (892)	2	Trendelenburg handle sleeve
96	3585 (892)	4	Roll pin
97	43479-50 (892)	1	Weight frame assembly complete
98	35407 (892)	1	Upper frame assembly—non-scale bed
99	10429 (892)	8	Washer (nylon)
100	43427 (892)	1	Knee cylinder cap

Item Number	Part Number	Quantity	Description
101	43424 (892)	1	Knee cylinder felt
102			
103	43426 (892)	2	Head cylinder cap
104	43423 (892)	2	Head cylinder felt
105			
106	46745 (892)†	4	Scale OMIL load beam,
107	39240-06 (892)†	2	Ground strap assembly
108	3972360 (892)†	2	Trendelenburg handle sleeve
109	45973 (892)	1	Head cylinder assembly—lh
110	46783 (892)†	1	Intermediate weight frame assembly
111	46785 (892)†	1	Foot rack assembly

† These parts are unique to European applications.

NOTES:

Sleep Surface

Figure 5-5. Sleep Surface

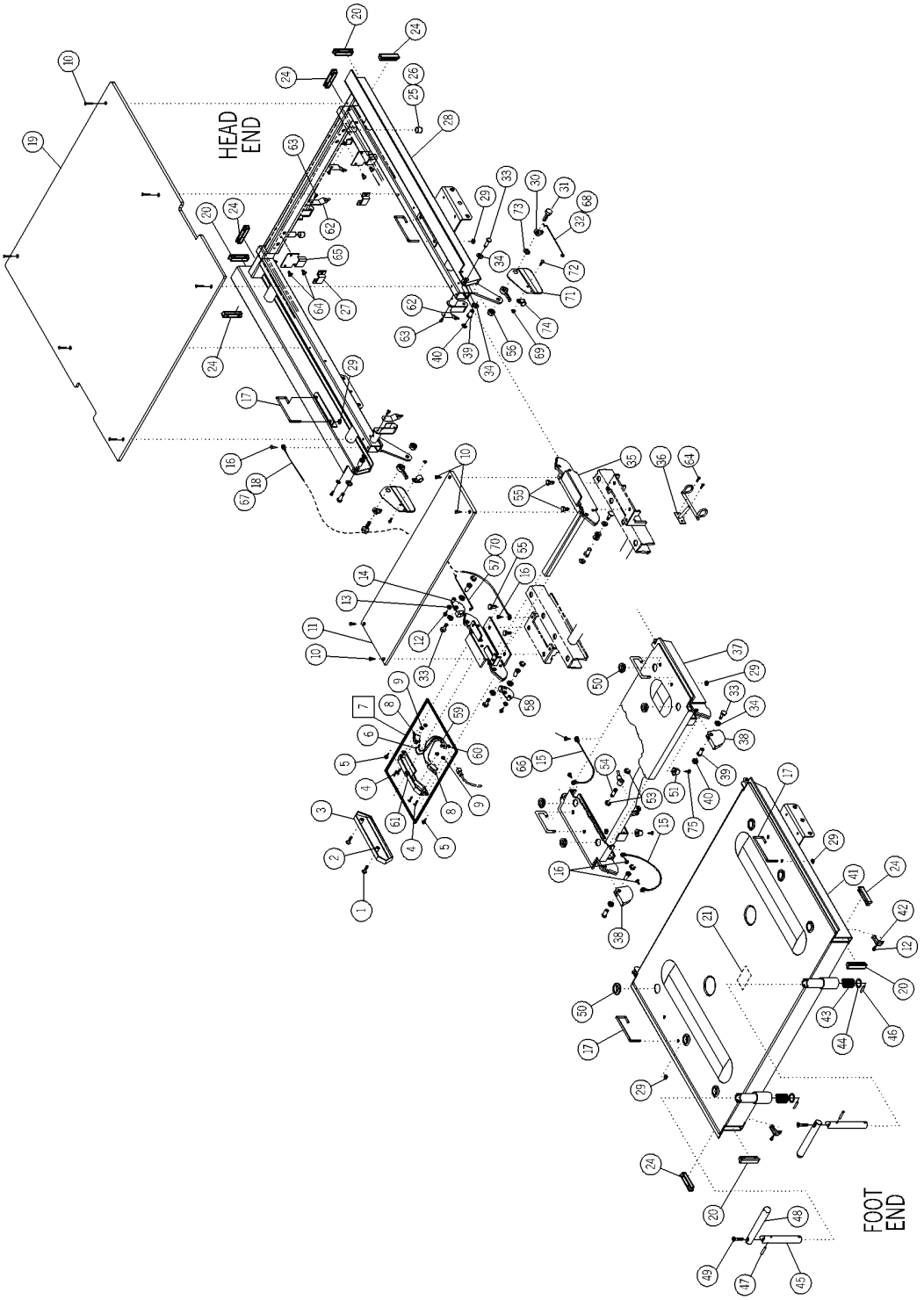

Table 5-8. Sleep Surface

Item Number	Part Number	Quantity	Description
1	90037-24 (892)	2	Screw
2	36698 (892)	2	Spacer
3	35990 (892)§	1	Auto contour cover
4	19555 (892)	4	Screw
5	4403 (892) or 18252 (892)	2	Screw (early version) Screw (current version)
6	34307 (892)	4	Terminal
7	35508 (892)	1	Auto contour assembly
8	19512 (892)	2	Switch
9	20605 (892) 37890 (892)	4	Locknut (early version) Keps nut (current version)
10	90039-04 (892) 28498 (892)	10	Screw (early version) Screw (current version)
11	35483 (892)	1	Seat pan—black resiten
12	4759 (892) 18252 (892)	4	Screw (early version) Screw (current version)
13	947 (892)	2	Lockwasher
14	35498 (892)§	1	Auto contour head cam
15	4565804 (892)	2	Ground strap assembly
16	18921 (892)	10	Screw
17	20544 (892)	6	Restraint bracket
18	4565805 (892)	1	Ground strap assembly
19	35484 (892)	1	Head pan—black resiten
20	35477 (892)§	4	End plug—2 3/8" long
21	36721 (892)	1	Caution label
22			
23			
24	35476-48 (892)	6	End plug—2" long
25	35327 (892)	2	Bumper—non-scale bed
26	35330 (892)	2	Bumper—scale bed
27	36358 (892)	2	Strike plate (early version)
28	38320 (892)§	1	Head section assembly
29	755 (892)	6	Locknut
30	35904 (892)	2	Eyelet

Item Number	Part Number	Quantity	Description
31	90017-20 (892)	2	Screw
32	35905 (892)	1	Head indicator rod—lh
33	35306 (892)	6	Hinge pin
34	35307 (892)	14	Spacer
35	35635 (892)§	1	Seat section welded assembly
36	36687 (892)§	2	Hook assembly
37	42795 (892)§	1	Knee section assembly
38	35480 (892)§	2	Protection shield
39	35305 (892)	6	Hinge bearing
40	35325 (892)	6	E-ring
41	42917 (892)§	1	Foot section assembly
42	19887 (892)	2	Foot rack insert
43	35688 (892)	2	Spring
44	35686 (892)	2	Washer
45	35683 (892)	2	Upright support—bed extender
46	128 (892)	2	Roll pin
47	142 (892)	2	Roll pin
48	35684 (892)	2	Support bar
49	19 (892)	2	Screw
50	12951 (892)	10	Grommet
51	33603 (892)	2	Bumper
52			
53	35326 (892)	2	E-ring
54	35478 (892)	1	Clevis pin
55	90016-12 (892)	4	Bolt
56	9428 (892)	2	Nut
57	35906 (892)	1	Head indicator rod—rh
58	35497 (892)§	1	Knee auto contour cam
59	22154 (892)	4	Female pin
60	30929 (892)	1	Housing (connector)
61	35499 (892)§	1	Auto contour switch housing
62	38621 (892)	2	Spring clip
63	393 (892)	2	Screw
64	18921 (892) or 90245-06 (892)	4	Screw (early version) Screw (current version)

Item Number	Part Number	Quantity	Description
65	47075 (892)	2	Striker assembly (current version)
66	3924004 (892)†	2	Ground strap assembly
67	3924005 (892)†	1	Ground strap assembly
68	46952 (892)†	1	Head indicator rod—lh
69	15250 (892)†	2	Locknut
70	46953 (892)†	1	Head indicator rod—rh
71	4695148 (892)†	2	Head cylinder shield assembly
72	17017 (892)†	2	Screw
73	46974PL (892)†	2	Bushing head cylinder shield
74	26797 (892)†	2	Cable clamp
75	15338 (892) or 18921 (892)	2	Screw (early version) Screw (current version)

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

† These parts are unique to European applications.

End Bumpers and Head and Foot Panels

Figure 5-6. End Bumpers and Head and Foot Panels

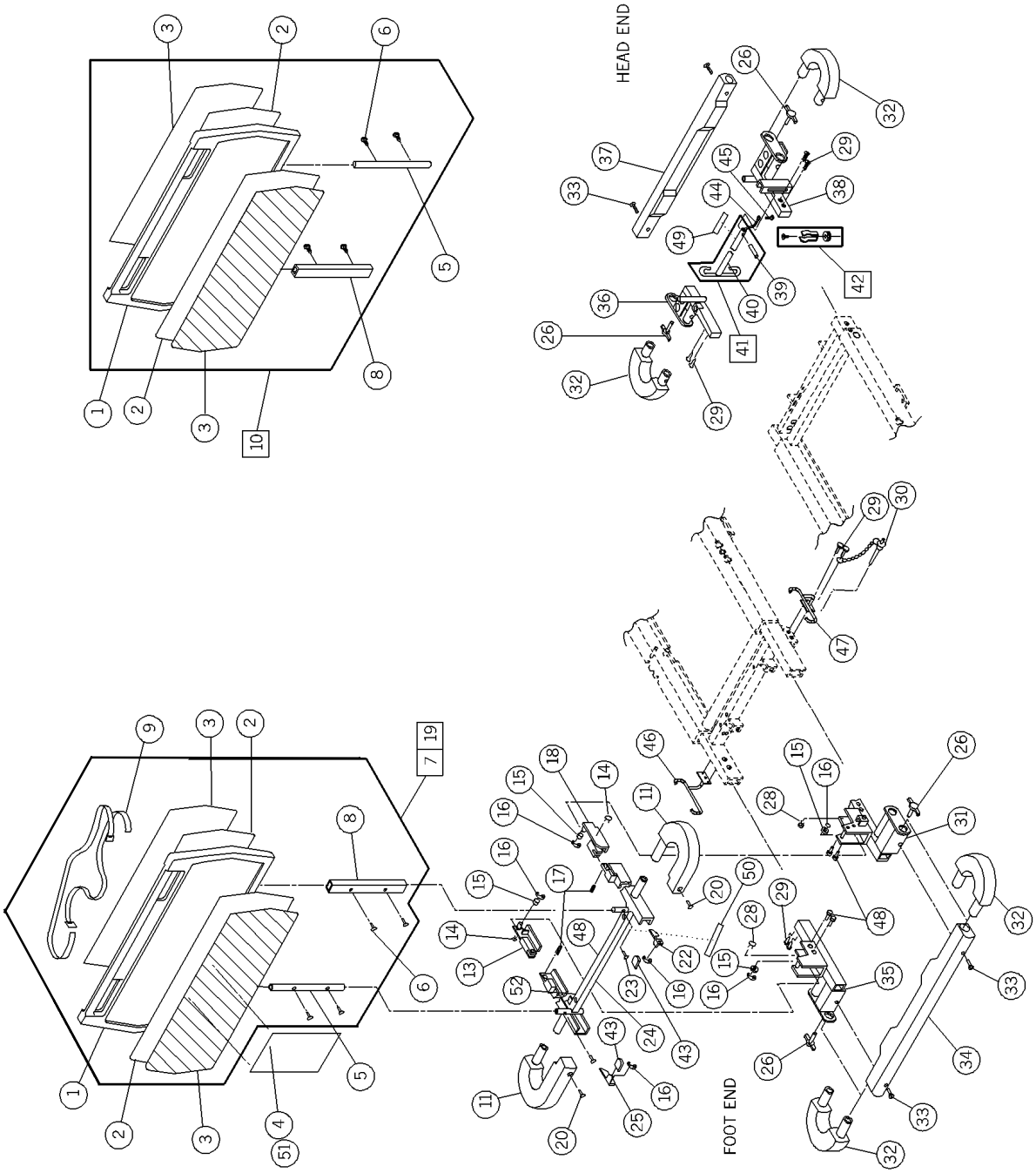

Table 5-9. End Bumpers and Head and Foot Panels

Item Number	Part Number	Quantity	Description
1	35399 (892)§	2	Head and foot bed panel
2	35621 (892)	4	HPL adhesive
3	35620 (892)*f*	4	HPL insert (specify color)
4	36630 (892)	1	Scale instruction label (early version)
5	35658 (892)	2	Round tube
6	90038-02 (892)	8	Screw
7	4100FC (892)*f*	1	Bed panel—foot without scale
8	36166 (892)	2	Rectangular tube
9	36031 (892)	1	Equipment strap
10	4101HC (892)*f*	1	Bed panel—head
11	35938 (892)	2	End bumper
12			
13	35535 (892)§	1	Hinge assembly—rh
14	35911 (892)	2	Round plug
15	35869 (892)	4	Roller
16	18890 (892)	6	Tru-arc ring
17	35918 (892)	2	Roll pin
18	35532 (892)§	1	Hinge assembly—lh
19	4100FD (892)*f*	1	Bed panel—foot with scale
20	28498 (892)	2	Screw
21			
22	35879 (892)	1	Shelf latch—lh
23	90271-14 (892)	2	Screw
24	38916 (892)§	1	Utility shelf weldment
25	35878 (892)	1	Shelf latch—rh
26	38135 (892)	4	Knob assembly
27			
28	35912 (892)	2	Plug
29	21913 (892)	12	Screw
30	36832 (892)	2	Ball lock pin
31	43473 (892)§	1	“U” shelf bracket welded assembly—lh
32	35855 (892)	4	End bumper

Item Number	Part Number	Quantity	Description
33	90039-04 (892)	4	Screw
34	35862 (892)	1	Bumper tube
35	43474 (892)§	1	“U” shelf bracket welded assembly—rh
36	36070 (892)§	1	Head end weldment—rh
37	36782 (892)	1	Bumper tube—head end
38	36069 (892)§	1	Head end weldment—lh
39	142 (892)	1	Roll pin
40	35780 (892)	1	IV rod
41	SA1303 (892)	1	IV rod assembly
42	SA1324 (892)	1	IV storage clip
43	36833 (892)	2	Thumb latch sleeve
44	35781 (892)	1	Ground strap and plug assembly
45	18920 (892)	1	Screw
46	42914 (892)§	1	Drainage rack—rh
47	42912 (892)§	1	Drainage rack—lh
48	45067 (892)	2	Trendelenburg label
49	46960 (892)†	1	Consult accompanying documentation label
50	36081 (892)	1	Caution label—utility shelf
51	43080 (892)	1	Instruction label (current version)
52	37627 (892)	2	Bumper

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

ƒ Specify high pressure laminate color.

† These parts are unique to European applications.

NOTES:

Nurse Control Panel (Standard Configuration)

Figure 5-7. Nurse Control Panel (Standard Configuration)

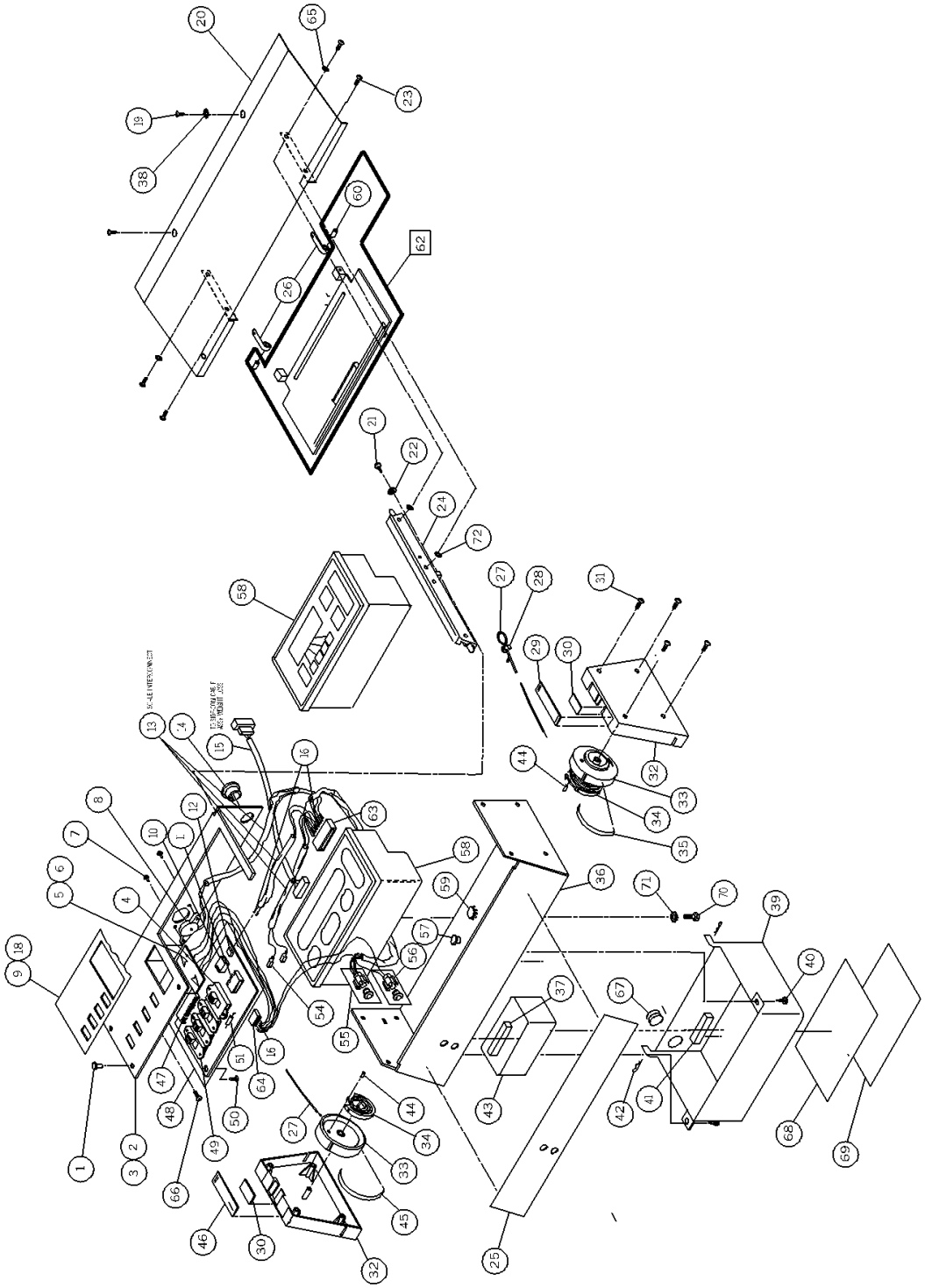

Table 5-10. Nurse Control Panel (Standard Configuration)

Item Number	Part Number	Quantity	Description
1	36014 (892)	1	Threadspacer
2	36012-50 (892)	1	Top plate—non-scale bed
3	36016-50 (892)	1	Top plate—scale bed
4	30809 (892)	1	Lockout switch
5	SA1519 (892)	1	Hilow switch and lockout label—non-scale bed
6	SA1520 (892)	1	Hilow switch and lockout label—scale bed
7	34526 (892)	2	Screw
8	30118S (892) or 30119 (892)	1	Piezo alarm assembly Piezo alarm assembly (with wires)
9	42789 (892)	1	Siderail lockout label (non-scale bed)
10	30957-03 (892)	1	3 pin header
11	30957-06 (892)	1	6 pin header
12	30955-03 (892)	1	Contact housing
13	37340 (892)	1	Cable assembly—scale interconnect
14	17410 (892)	1	Snap bushing
15	36735 (892)	1	Scale cable assembly
16	30952 (892)	4	Terminal
17			
18	42788 (892)	1	Siderail lockout label—scale bed
19	18921 (892)	2	Screw
20	39293-50 (892)	1	Cover (top)
21	4577 (892)	2	Screw
22	31236 (892)	2	Lockwasher
23	90236-06 (892)	4	Screw
24	36018 (892)	2	Slide
25	45868 (892) or 45869 (892)	1	Caution label—scale bed Caution label—non-scale bed
26	36325 (892)	2	Spring
27	36004 (892)	2	Cable
28	36197 (892)	2	Wire clamp

Item Number	Part Number	Quantity	Description
29	46972 (892)	1	Trendelenburg angle label (intl. graphics)
30	35861 (892)	2	Lens
31	28498 (892)	8	Screw
32	35711 (892)	2	Indicator housing
33	35712 (892)	2	Indicator wheel
34	36159 (892)	2	Spring
35	35839 (892)	1	Trendelenburg indicator label
36	37280 (892)	1	Nurse control housing
37	42928 (892)	1	Foam spacer
38	15907 (892)	2	Lockwasher
39	37747-50 (892)	1	Battery box
40	90245-06 (892)	2	Screw
41	37284 (892)	1	Foam spacer
42	4179 (892)	2	Hair pin cotter key
43	SA1465 (892)	1	Battery with foam pads
44	26142 (892)	2	Roll pin
45	36085 (892)	1	Trendelenburg indicator label
46	35827 (892) or 46973 (892)	1	Trendelenburg limit label Blank cover label
47	30957-16 (892)	1	16 pin header
48	35650 (892)	1	Lockout switch board assembly
49	30810 (892)	3	Lockout switch
50	31144 (892)	3	Screw
51	30007-4715B8 (892)	1	Resistor
52			
53			
54	36119 (892)	2	Terminal
55	35646-04 (892)	1	Yellow LED assembly
56	35646-2 (892)	1	Red LED assembly
57	35041 (892)	1	Strain relief bushing
58	36055 (892) or 48357 (892)	1	Scale unit (early version) Scale unit (current version)
59	37930 (892)	1	Plug button—1/2"
60	39103 (892)	2	Spool

Item Number	Part Number	Quantity	Description
61			
62	SA1423 (892)	1	Nurse control cover kit
63	30955-10 (892)	1	Pin housing—single row
64	30955-06 (892)	1	Contact housing
65	3844 (892)	2	Washer
66	34526 (892)	1	Screw
67	35041 (892)	1	Strain relief bushing
68	38051 (892)	1	Calibration label
69	36701 (892)	1	Calibration overlay label
70	13206 (892)	1	Screw
71	15907 (892)	1	Star washer
72	2449 (892)	4	Flat washer

† These parts are unique to European applications.

Nurse Control Panel (Dutch, French, German Application)

Figure 5-8. Nurse Control Panel (Dutch, French, German Application)

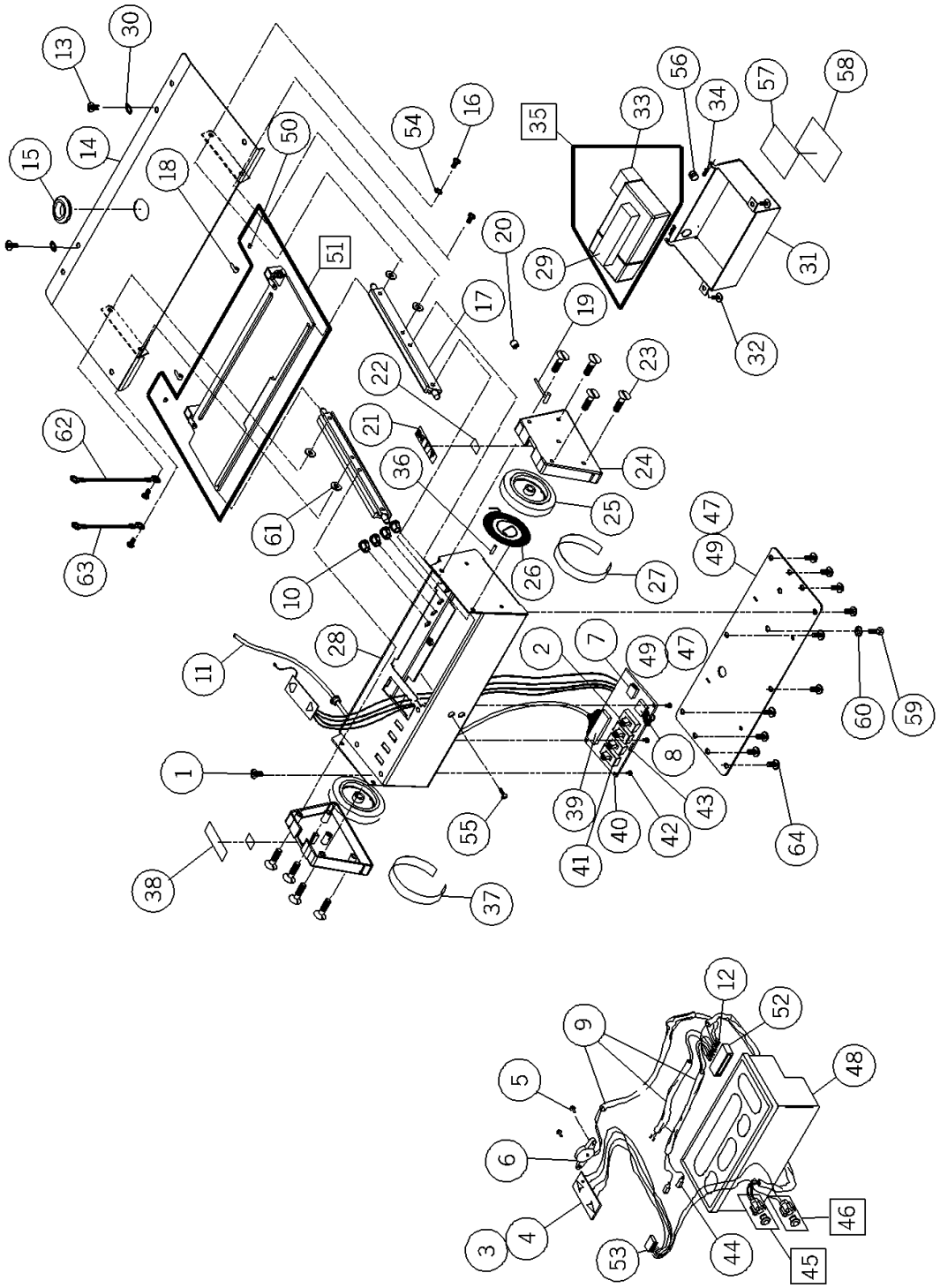

Table 5-11. Nurse Control Panel (Dutch, French, German Application)

Item Number	Part Number	Quantity	Description
1	36014 (892)	1	Threadspcaer
2	30809 (892)	1	Lockout switch
3	SA1519 (892)	1	Hilow switch and lockout label—non-scale bed
4	SA1520 (892)	1	Hilow switch and lockout label—scale bed
5	34526 (892)	2	Screw
6	30118S (892) or 30119 (892)	1	Piezo alarm assembly Piezo alarm assembly (with wires)
7	30957-03 (892)	1	3 pin header
8	30957-06 (892)	1	6 pin header
9	37340 (892)	1	Cable assembly—scale interconnect
10	48565 (892)*	4	Snap bushing
11	36735 (892)	1	Scale cable assembly
12	30952 (892)	4	Terminal
13	18921 (892)	2	Screw
14	46867-50 (892)	1	Top cover assembly
15	12951 (892)	1	Grommet
16	90236-06 (892)	4	Screw
17	46970 (892)	2	Slide
18	36325 (892)	2	Spring
19	36004 (892)	2	Cable
20	36197 (892)	2	Wire clamp
21	46972 (892)	1	Trendelenburg angle label (intl. graphics)
22	35861 (892)	2	Lens
23	28498 (892)	8	Screw
24	35711 (892)	2	Indicator housing
25	35712 (892)	2	Indicator wheel
26	36159 (892)	2	Spring
27	35839 (892)	1	Trendelenburg indicator label
28	48563-50 (892)	1	Nurse control box assembly
29	42928 (892)	1	Foam spacer

Item Number	Part Number	Quantity	Description
30	15907 (892)	2	Lockwasher
31	37747-50 (892)	1	Battery box
32	90245-06 (892)	2	Screw
33	37284 (892)	1	Foam spacer
34	4179 (892)	2	Hair pin cotter key
35	SA1465 (892)	1	Battery with foam pads
36	26142 (892)	2	Roll pin
37	36085 (892)	1	Trendelenburg indicator label
38	35827 (892) or 46973 (892)	1	Trendelenburg limit label Blank cover label
39	30957-16 (892)	1	16 pin header
40	35650 (892)	1	Lockout switch board assembly
41	30810 (892)	3	Lockout switch
42	31144 (892)	3	Screw
43	300074715B8 (892)	1	Resistor formed
44	36119 (892)	2	Terminal
45	35646-04 (892)	1	Yellow LED assembly
46	35646-2	1	Red LED assembly
47	35041 (892)	1	Strain relief bushing
48	36055 (892)* or 48357 (892)*	1	Weight scale—non-VDE (early version) Scale readout assembly—non-VDE (current version)
49	37930 (892)	1	Hole plug
50	39103 (892)	2	Spool
51	SA1423 (892)	1	Nurse control cover kit
52	30955-10 (892)	1	Pin housing single row
53	30955-06 (892)	1	Contact housing
54	3844 (892)	1	Star washer
55	34526 (892)	1	Screw
56	35041 (892)	1	Strain relief bushing
57	38051 (892)	1	Calibration label
58	36701 (892)	1	Calibration label overlay
59	13206 (892)*	1	Screw
60	15907 (892)*	1	Lockwasher

Item Number	Part Number	Quantity	Description
61	2449 (892)	4	Washer
62	4565804 (892)	1	Ground strap assembly
63	4565802 (892)	1	6.7" ground strap assembly (17cm)
64	47566 (892)	10	Screw

* These items do not apply when using a VDE approved scale unit.

Hydraulic Hoses

Figure 5-9. Hydraulic Hoses (Beds Manufactured Before 2/93)

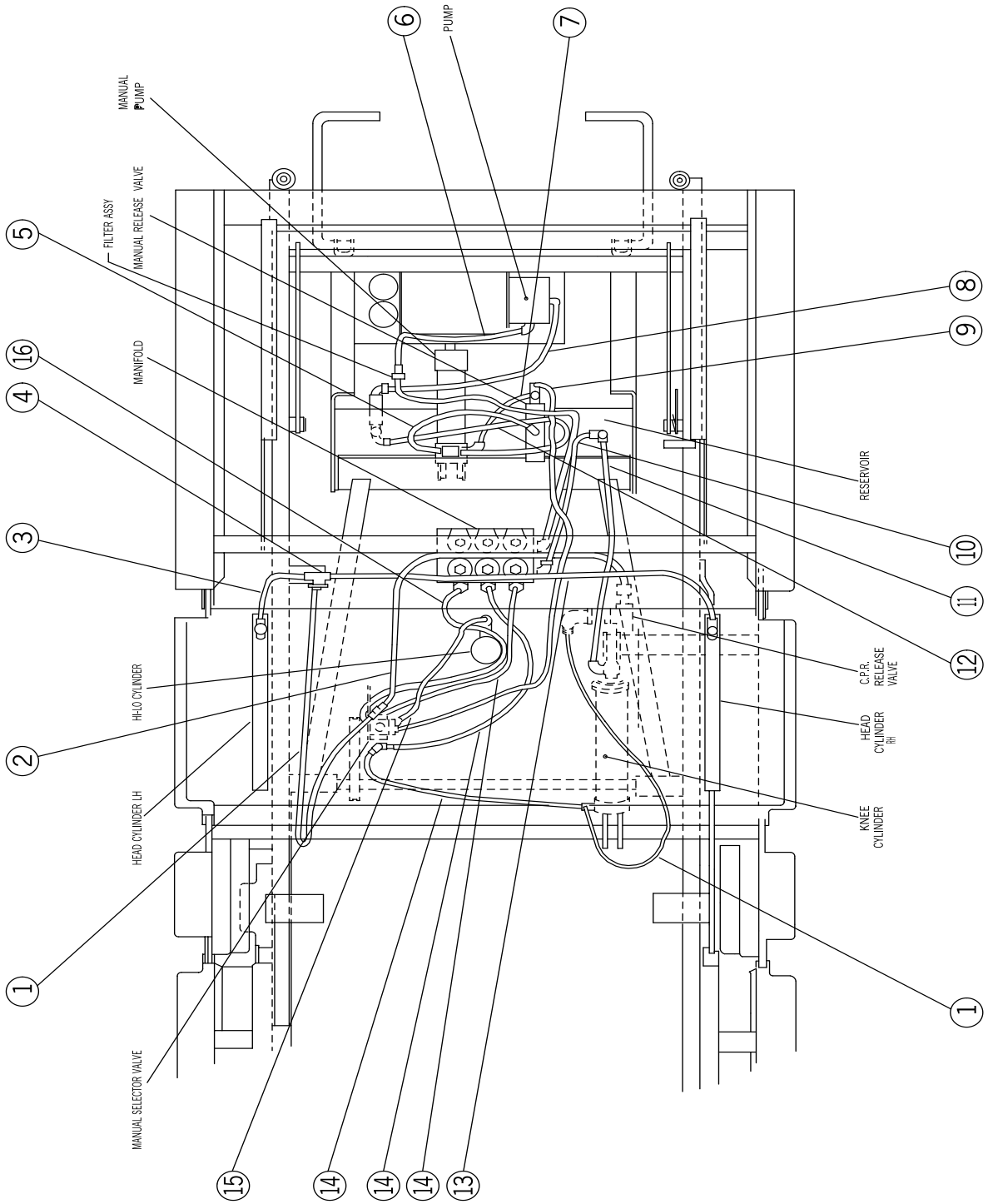

Table 5-12. Hydraulic Hoses (Beds Manufactured Before 2/93)

Item Number	Part Number	Quantity	Description
1	36725 (892)	2	Hose assembly (selector valve assembly to bulkhead fitting, and, knee cylinder to CPR valve)
2	35795 (892)	1	Hose assembly (selector valve assembly to CPR valve)
3	36726 (892)	1	Hose assembly (bulkhead tee to head cylinder)
4	36708 (892)	1	Bulkhead tee
5	35800 (892)	1	Hose assembly (manual pump to manual release)
6	SA1277 (892)	1	Hose assembly with filter (electric pump to filter to manifold)
7	36206 (892)	1	Hose assembly (manual pump to manual release)
8	39407 (892) or 42290 (892)	1	Hose assembly (reservoir to electric pump—early version) Hose assembly (reservoir to electric pump—current version)
9	36205 (892)	1	Hose assembly (selector valve assembly to manual release)
10	35801 (892)	1	Hose assembly (manifold to reservoir return)
11	36723 (892)	1	Hose assembly (CPR valve to reservoir return)
12	35799 (892)	1	Hose assembly—low pressure (reservoir to main pump)
13	35796 (892)	1	Hose assembly (bulkhead tee to right side head cylinder)
14	35797 (892)	3	Hose assembly (selector valve assembly to knee cylinder, selector valve assembly to manifold knee port, and selector valve assembly to manifold head port)

Item Number	Part Number	Quantity	Description
15	35932 (892)	1	Hose assembly (selector valve assembly to hilow cylinder)
16	35798 (892)	1	Hose assembly (manifold to selector valve assembly hilow port)

NOTES:

Figure 5-10. Hydraulic Hoses (Beds Manufactured After 1/93)

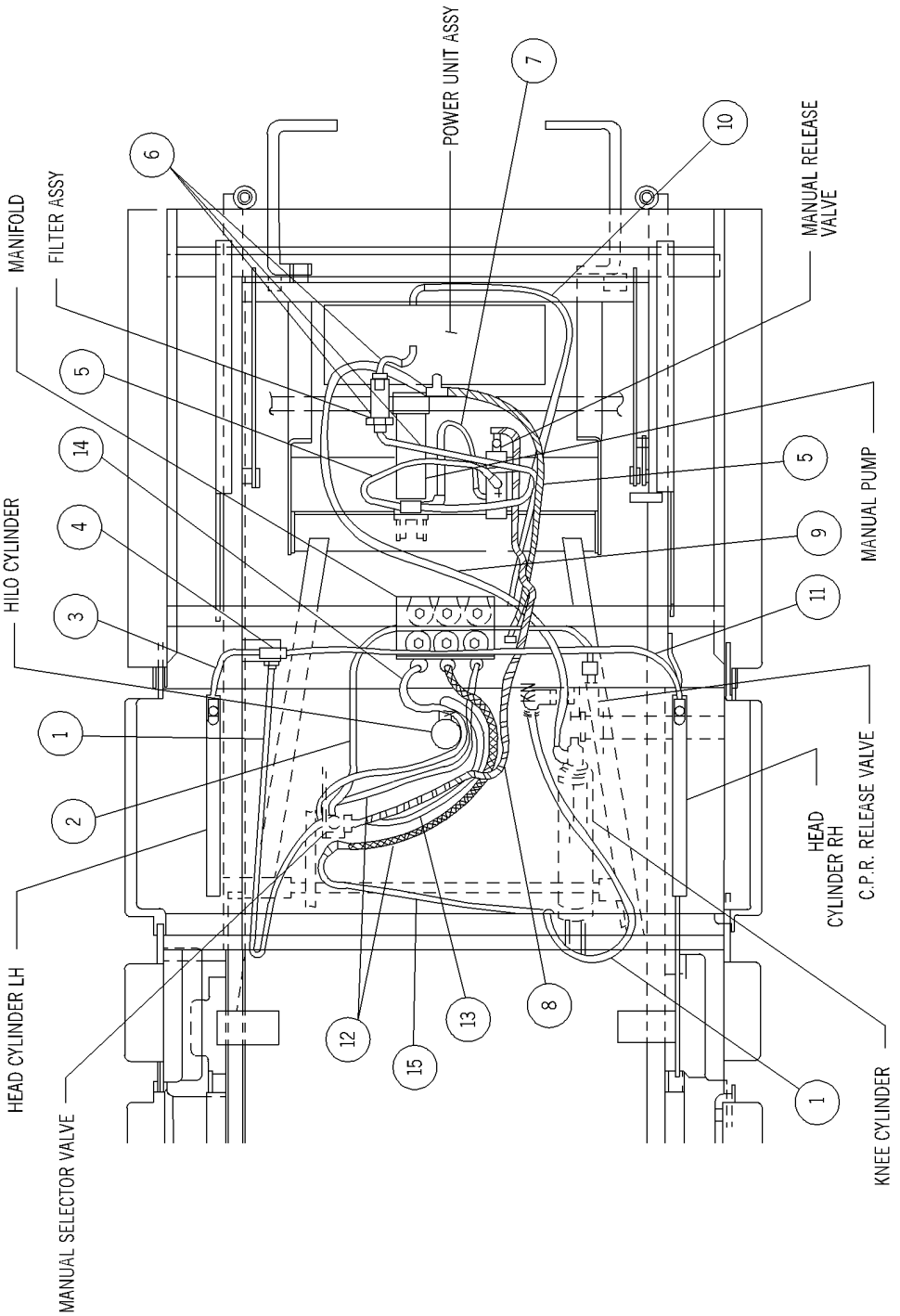

Table 5-13. Hydraulic Hoses (Beds Manufactured After 1/93)

Item Number	Part Number	Quantity	Description
1	36725 (892)	2	Hose assembly (selector valve assembly to bulkhead tee and knee cylinder to CPR valve)
2	35795 (892)	1	Hose assembly (selector valve assembly to CPR valve
3	36726 (892)	1	Hose assembly (bulkhead tee to lh head cylinder)
4	36708 (892)	1	Bulkhead tee
5	35800 (892)	2	Hose assembly (power unit to manual release valve and power unit to manifold return)
6	SA1277 (892)	1	Hose assembly with filter (power unit through filter to manifold)
7	36206 (892)	1	Hose assembly (pump pedal assembly to manual release valve)
8	36205 (892)	1	Hose assembly (selector valve assembly to manual release valve)
9	42291 (892)	1	Hose assembly (CPR valve assembly to power unit)
10	42290 (892)	1	Hose assembly (power unit to release valve assembly)
11	35796 (892)	1	Hose assembly (Bulkhead tee to rh head cylinder)
12	35797 (892)	2	Hose assembly (manifold head port to selector valve assembly and manifold knee port to selector valve assembly)
13	35932 (892)	1	Hose assembly (selector valve assembly to hilow cylinder)

Item Number	Part Number	Quantity	Description
14	35798 (892)	1	Hose assembly (manifold hilow port to selector valve assembly)
15	35797 (892)	1	Hose assembly (selector valve assembly to knee cylinder)

NOTES:

Head Siderail Assembly

Figure 5-11. Head Siderail Assembly

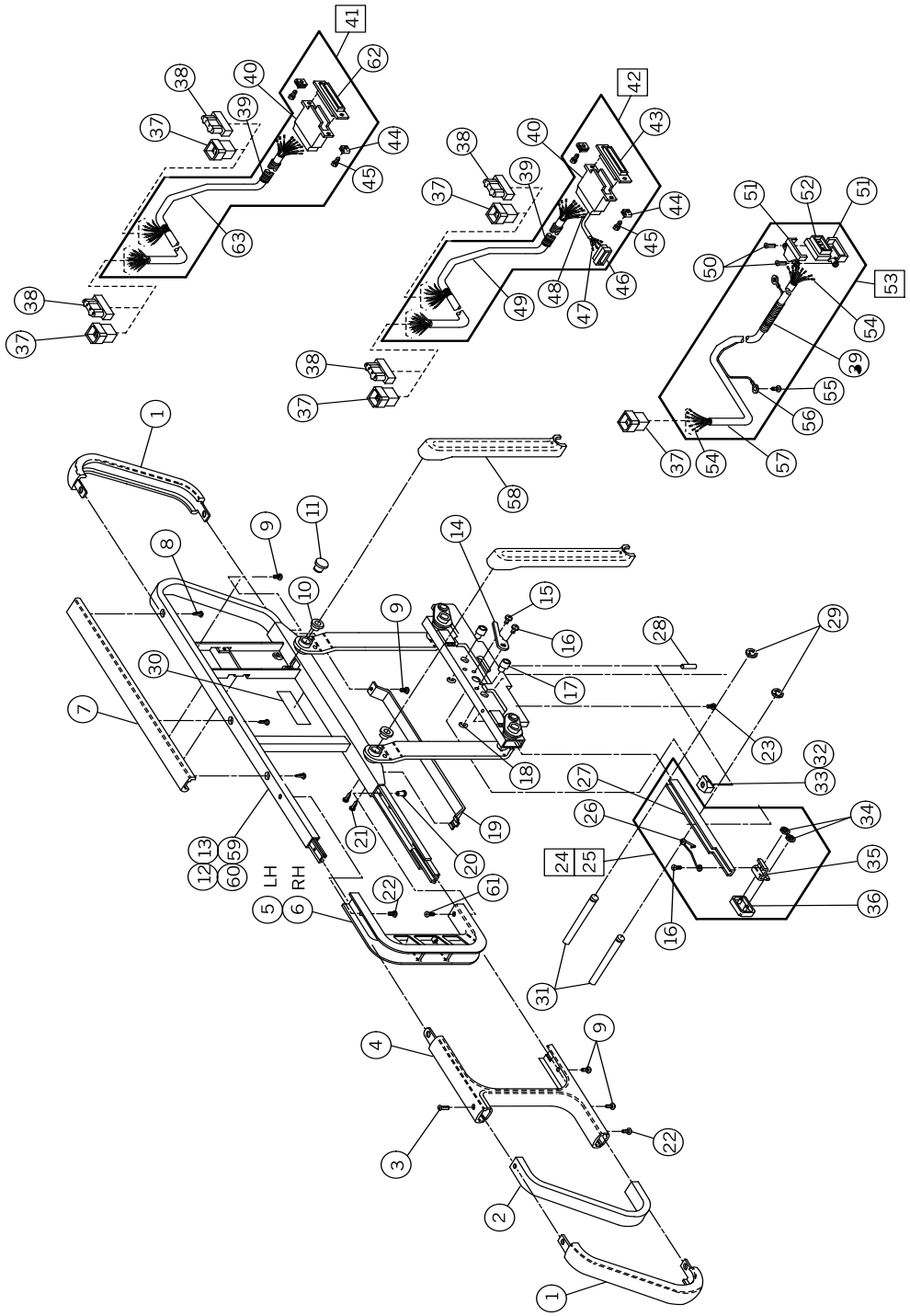

Table 5-14. Head Siderail Assembly

Item Number	Part Number	Quantity	Description
1	35207 (892)§	2	End cane
2	35205 (892)	1	Siderail extension rail
3	90056-08 (892)	1	Screw
4	35206 (892)§	1	Cover control housing
5	35264 (892)§	1	Control housing lh
6	35265 (892)§	1	Control housing rh
7	35212-48 (892)	1	Top cane
8	90188-08 (892)	3	Hilow thread forming screw
9	4759 (892)	4	Screw
10	28717 (892)	2	Bushing
11	29457 (892)§	1	Hole plug
12	38361 (892)§	1	Siderail frame assembly-rh
13	38360 (892)§	1	Siderail frame assembly-lh
14	35190 (892)	1	Latch (siderail lock)
15	90239-05 (892)	1	Screw
16	35072 (892)	2	Shoulder screw
17	38321 (892)	2	Guide bushing
18	37297 (892)	2	Retaining ring
19	35479 (892)	1	Bottom cover
20	35511 (892)	1	Rivnut
21	90166-01 (892)	4	Screw
22	18921 (892)	2	Screw
23	37387 (892)	1	Shoulder screw
24	38379 (892)	1	Release arm—lh head/rh foot
25	38378 (892)	1	Release arm—rh head/lh foot
26	35261 (892)	1	Spring
27	37980 (892)	1	Release arm lever
28	39675 (892)	1	Roll pin
29	35326 (892)	2	E-ring
30	41696-01 (892)	1	Warning/caution label

Item Number	Part Number	Quantity	Description
31	36699 (892)	2	Slide bar
32	38980 (892)	1	Latch—lh head/rh foot
33	38981 (892)	1	Latch—rh head/lh foot
34	17291 (892)	2	Pushnut
35	35841 (892)	1	Release arm extension
36	19562 (892)	1	Latch cover
37	28519 (892)	3	Plug—9 position
38	28492 (892)	2	Plug—4 position
39	31544 (892)	2	Spring
40	42005-25 (892)	1	Strain relief
41	38895 (892)	1	18 conductor assembly—rh
42	38896 (892)	1	18 conductor cable—lh
43	28885 (892)	1	Plug
44	28966 (892)	2	Retainer
45	28967 (892)	2	Screw
46	30948 (892)	1	Receptacle—5 pin
47	22154 (892)	5	Female pin
48	28883 (892)	19	Pin—Male
49	34390 (892)	1	18 conductor cable blank
50	16116 (892)	2	Screw
51	36267 (892)	2	Strain relief
52	22151 (892)	1	Plug
53	38893 (892)	1	9 conductor cable
54	22153 (892)	36	Male pin
55	393 (892)	1	Screw
56	28867 (892)	1	Ground strap assembly
57	19769 (892)	1	Conductor cable (by the foot)
58	35211 (892)§	2	Wire cover
59	38359 (892)§	1	Siderail frame assembly-rh-non SideCom
60	38358 (892)§	1	Siderail frame assembly-lh-non SideCom

Item Number	Part Number	Quantity	Description
61	15338 (892)	1	Screw
62	40895 (892)	1	Plug—25 conductor
63	34390 (892)	1	18 conductor cable blank
64	39240-10 (892)†	1	Ground strap

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

† These parts are unique to European applications.

Communication and Control Housing Assembly

Figure 5-12. Communication and Control Housing Assembly

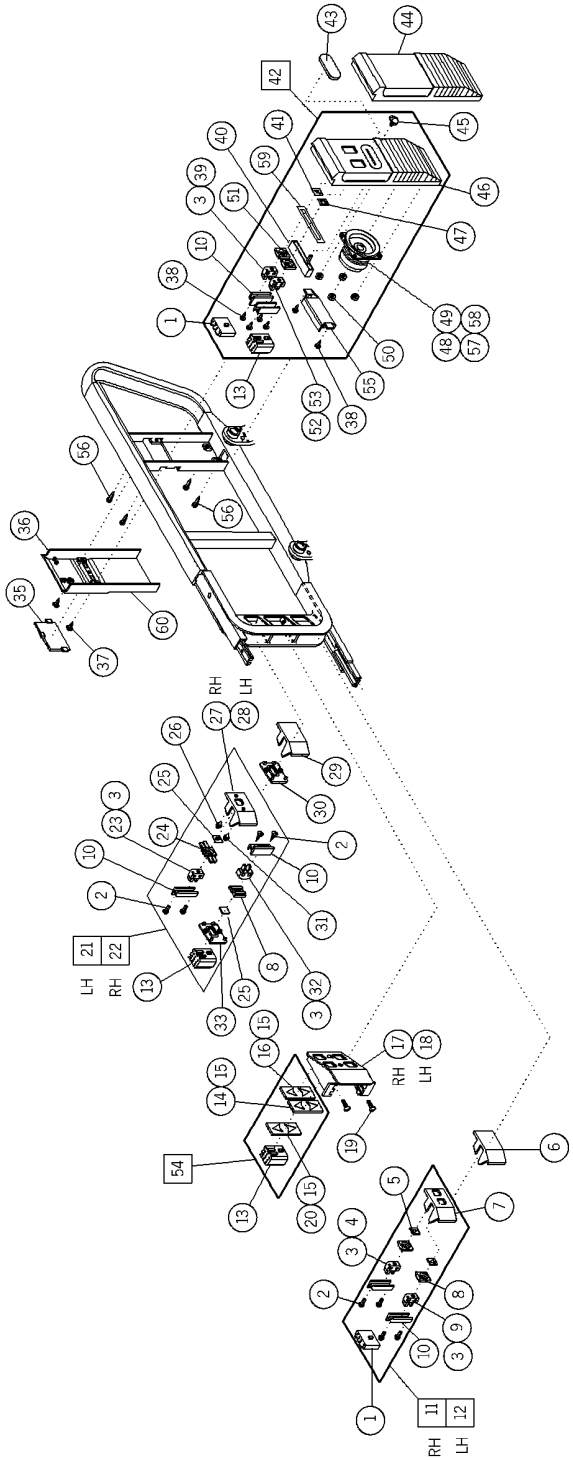

Table 5-15. Communication and Control Housing Assembly

Item Number	Part Number	Quantity	Description
1	28491 (892)	2	4 position receptacle
2	28623 (892)	8	Screw
3	31767 (892)	5	Nurse call switch
4	32172 (892)	1	Switch
5	SA1137 (892)	2	Switch overlay, light label
6	28328 (892)§	1	Lighting insert blank
7	31661 (892)	1	Light insert
8	28286 (892)	4	Switch back
9	31767 (892)	1	Nurse call switch
10	28752 (892)	6	Switch mount
11	28507 (892)	1	Light insert assembly—rh
12	28506 (892)	1	Light insert assembly—lh
13	28518 (892)	3	Receptacle—9
14	82W104S (892)	1	Knee switch assembly
15	29699 (892)	3	Universal membrane switch
16	82W103S (892)	1	Head switch assembly
17	31663 (892)	1	Head and knee insert—rh
18	31664 (892)	1	Head and knee insert—lh
19	18516 (892)	2	Screw
20	82W102S (892)	1	Hilow switch assembly
21	28508 (892)	1	Nurse call insert assembly—lh
22	28509 (892)	1	Nurse call insert assembly—rh
23	31766 (892)	1	Nurse call inner switch assembly
24	28795 (892)	1	Nurse call switch back
25	SA1138 (892)	2	Nurse switch overlay label
26	83W005 (892)	1	LED—red
27	31659 (892)	1	Nurse call insert rh
28	31660 (892)	1	Nurse call insert lh
29	31274 (892)§	1	Nurse call insert blank
30	31273 (892)§	1	Nurse call insert blank
31	83W004 (892)	1	LED—yellow
32	31846 (892)	1	Nurse call outer switch assembly
33	31662 (892)	1	Nurse call insert

Item Number	Part Number	Quantity	Description
34			
35	34408-48 (892)	1	Cover plate
36	38514-01 (892)	1	Communication housing—back
37	34457 (892)	2	Screw
38	34683 (892)	6	Screw
39	31845 (892)	1	Switch
40	35290 (892)	1	Volume control
41	SA1531 (892)	1	Radio switch label—overlay
42	42906 (892)	1	Communication housing assembly
43	91V053 (892)	1	Volume knob cover
44	34454 (892)§	1	Communication housing blank
45	42684 (892)	1	Volume knob
46	42945-02 (892)	1	Communication housing front
47	SA1530 (892)	1	T.V. switch label—overlay
48	28550 (892)	1	Speaker
49	31770 (892)	1	Speaker assembly
50	28562 (892)	4	Palnut
51	38607 (892)	2	Switch back
52	33344 (892)	1	Switch—T.V.
53	31768 (892)	1	Entertainment switch
54	34932 (892)	1	Bed function switch assembly
55	38666 (892)	1	Volume bracket
56	34684 (892)	4	Screw
57	38260 (892)	1	Foam tape
58	40776 (892)	1	Label
59	42214 (892)	1	Volume gasket
60	38778 (892)	1	Label

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

NOTES:

Foot End Siderail

Figure 5-13. Foot End Siderail

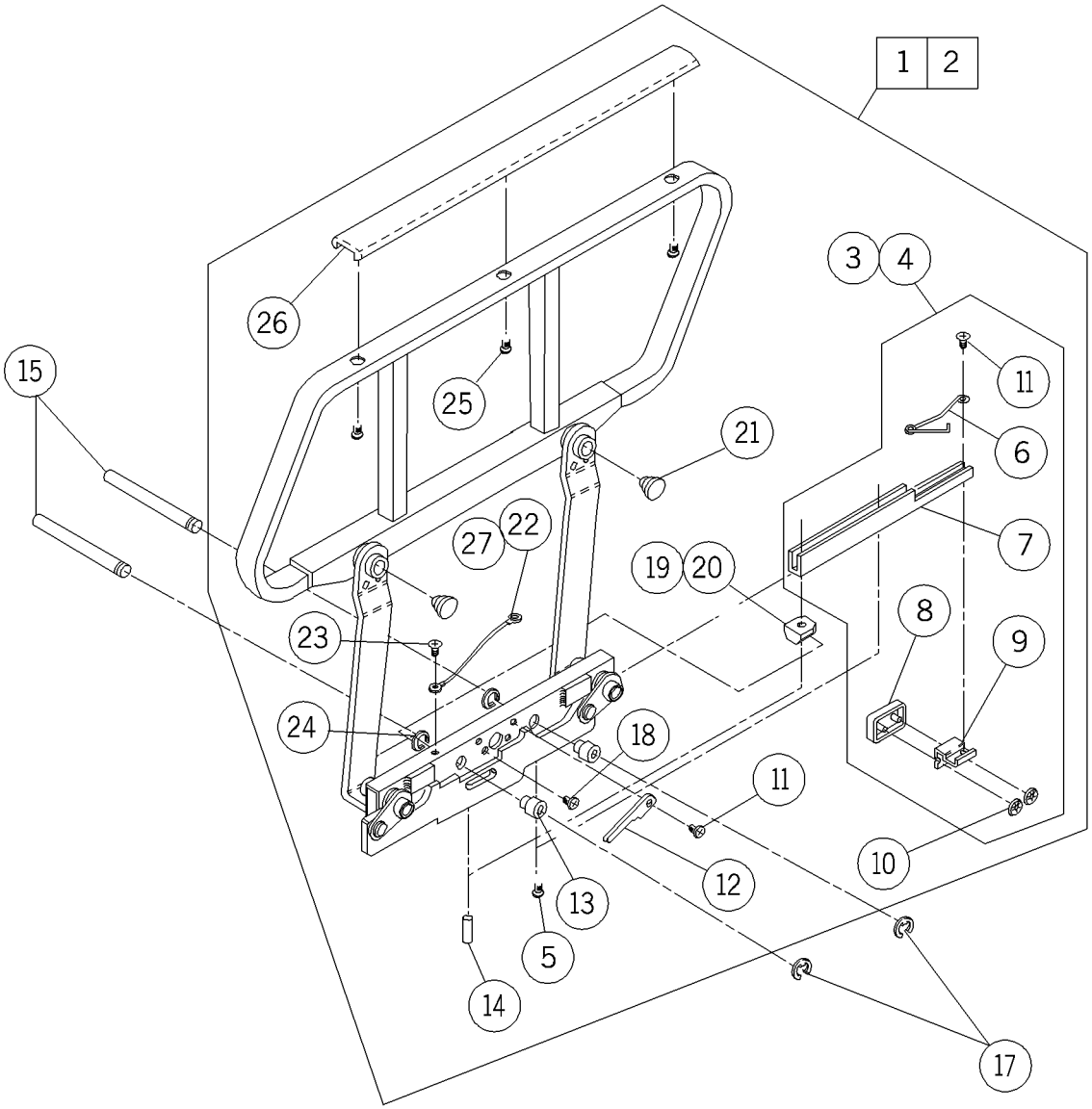

Table 5-16. Foot End Siderail

Item Number	Part Number	Quantity	Description
1	38375-48 (892)	1	Foot siderail—rh
2	38374-48 (892)	1	Foot siderail—lh
3	38378 (892)	1	Release arm assembly rh head/lh foot
4	38379 (892)	1	Release arm assembly lh head/rh foot
5	37387 (892)	2	Shoulder screw
6	35261 (892)	1	Spring
7	37980 (892)	1	Release arm lever
8	19562 (892)	1	Latch cover
9	35841 (892)	1	Release arm extension
10	17291 (892)	2	Pushnut
11	35072 (892)	2	Shoulder screw
12	35190 (892)	1	Latch
13	38321 (892)	2	Guide bushing
14	39675 (892)	1	Roll pin
15	36699 (892)	2	Slide bar
16			
17	35326 (892)	2	E-ring
18	90239-05 (892)	1	Screw
19	38980 (892)	1	Latch— lh head, rh foot
20	38981 (892)	1	Latch— rh head, lh foot
21	29457-48 (892)	2	Hole plug
22	28629 (892)	1	Ground strap assembly
23	18921 (892)	1	Screw
24	37297 (892)	2	Retaining ring
25	90188-08 (892)	3	Screw

Item Number	Part Number	Quantity	Description
26	35209-48 (892)	1	Top cane
27	39240-06 (892)†	1	Ground strap assembly

† These parts are unique to European applications.

NOTES:

Covers

Figure 5-14. Covers

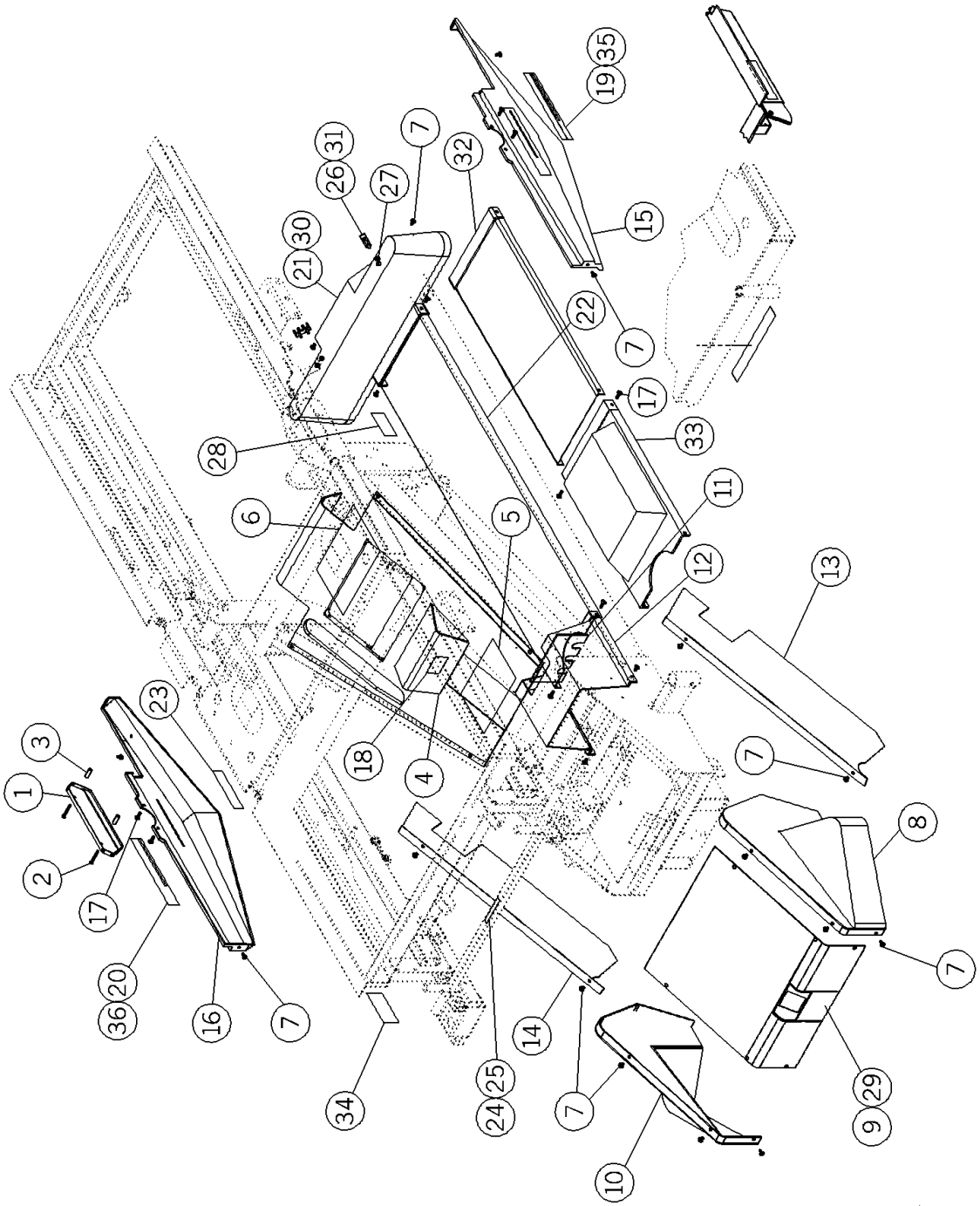

Table 5-17. Covers

Item Number	Part Number	Quantity	Description
1	35990 (892)§	1	Auto contour cover
2	90037-24 (892)	2	Screw
3	36698 (892)	2	Spacer
4	42754 (892)	1	Lift cover
5	42942 (892)	1	Hydraulic label
6	35396 (892)	1	Wiring diagram
7	18921 (892)	24	Screw
8	35732 (892)	1	Foot cover—lh
9	35730 (892)§	1	Top cover—foot end (early version)
10	35731 (892)§	1	Foot cover—rh
11	36867 (892)	1	Coil cover
12	35733 (892)§	1	Manifold cover
13	35988 (892)§	1	Lift cover—lh
14	35987 (892)§	1	Lift cover—rh
15	35735 (892)§	1	Side cover—lh
16	35734 (892)§	1	Side cover—rh
17	18920 (892)	6	Screw
18	22247 (892)	1	Caution label
19	44087 (892)	1	International left head elevation label
20	44088 (892)	1	International right head elevation label
21	43091 (892)	1	Axle cover
22	43092 (892)	1	Base cover
23	36655 (892)	2	Load capacity label
24	36701 (892)	1	Calibration label overlay
25	38050 (892)	1	Calibration label
26	36770 (892)	2	Cord clip
27	29788 (892)	4	Twist nut
28	36082 (892) or 42924 (892) or 44089 (892)	1	IV storage label IV storage label International IV storage label
29	43825 (892)	1	Top foot cover (current version)

Item Number	Part Number	Quantity	Description
30	44373-48 (892)†	1	Axle cover
31	39059 (892)†	1	Cord holder injection
32	44375 (892)†	1	Base cover
33	44374 (892)†	1	Base cover foot end
34	46960 (892)†	2	Consult accompanying documentation label
35	46958 (892)†	1	Label head elev. lh Century
36	46957(892)†	1	Label head elev. rh Century

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

† These parts are unique to European applications.

NOTES:

Integrated Air Support System (Optional)

Figure 5-15. Integrated Air Support System (Optional)

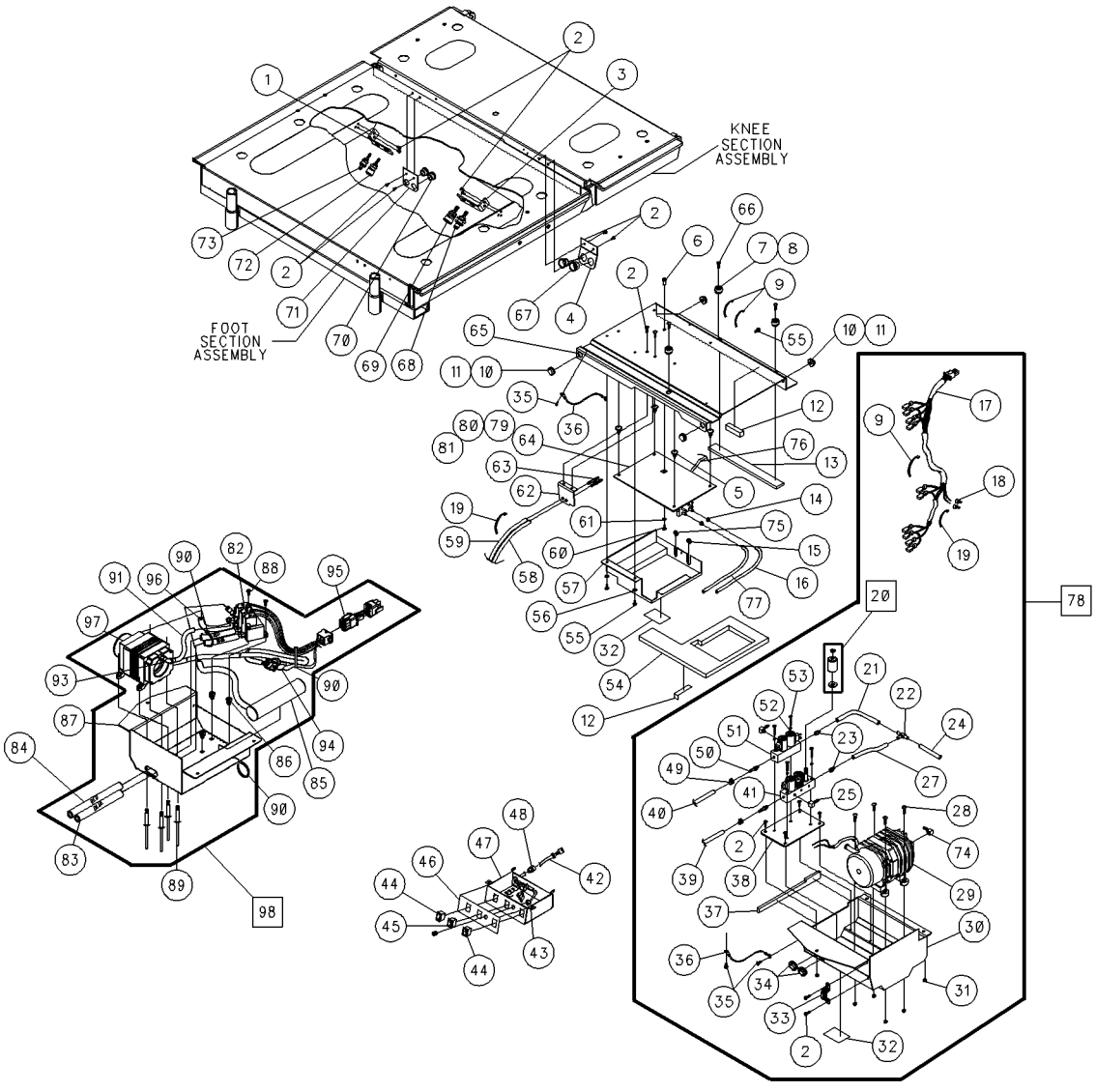

Table 5-18. Integrated Air Support System (Optional)

Item Number	Part Number	Quantity	Description
1	38220 (892)	1	0.125 coupling mount
2	90245-06 (892)	16	Screw
3	38219 (892)	1	0.250 coupling mount
4	42761 (892)	1	Hose guide
5	35663 (892)	4	Standoff
6	35511 (892)	1	Rivnut
7	42740 (892)	3	Box vibration mounting
8	42737 (892)	3	Box vibration bushing
9	19124 (892)	3	Large cable tie
10	42739-01 (892)	4	Pan vibration mounting
11	42739-02 (892)	4	Pan vibration bushing
12	42747 (892)	2	Inlet gasket
13	42720 (892)	1	Box gasket
14	42744 (892)	2	Hose clamp
15	42743-02 (892)	1	Grommet
16	42736-02 (892)	1	Sense hose flex—blue
17	42730 (892)	1	Solenoid wiring assembly
18	32741 (892)	2	Wire joint
19	14450 (892)	2	Small cable tie
20	SA4475 (892)	5	Solenoid
21	42731-03 (892)	1	Solenoid hose—lower inlet
22	39507 (892)	1	Connector tee
23	38289 (892)	2	Relief valve
24	42731-01 (892)	1	Solenoid hose—compressor outlet
25	38287 (892)	2	90 degree elbow
26			
27	42731-02 (892)	1	Solenoid hose—upper inlet
28	90027-08 (892)	4	Screw
29	38256 (892)	1	Air compressor
30	42726 (892)	1	Compressor box assembly
31	777 (892)	7	Hex locknut
32	22247 (892)	2	Caution label
33	38300 (892)	1	Support clamp

Item Number	Part Number	Quantity	Description
34	42743-03 (892)	2	Grommet
35	34682 (892)	3	Screw
36	35926 (892)	2	Ground strap assembly
37	42721 (892)	1	Cover gasket
38	38291 (892)	1	Manifold mounting plate
39	42732-02 (892)	1	Fill hose upper—blue
40	42732-01 (892)	1	Fill hose lower—red
41	42784 (892)	1	Valve manifold—upper assembly
42	42729 (892)	1	Air system control cable
43	42782 (892)	1	Complete LED assembly (yellow)
44	41437-02 (892)	2	Rocker switch
45	42742-01 (892)	1	Rocker switch—momentary
46	42759 (892)	1	Air mattress label
47	42745 (892)	1	Control box
48	25188 (892)	1	Strain relief
49	38202 (892)	2	Hose clamp
50	38288 (892)	2	Straight fitting
51	42785 (892)	1	Valve manifold—lower assembly
52	39257 (892)	4	Lockwasher—helical
53	21230 (892)	4	Screw
54	42719 (892)	1	Compressor gasket
55	90037-07 (892)	3	Screw
56	947 (892)	2	Lockwasher
57	42727 (892)	1	Air board cover
58	42734-02 (892)	1	Sense hose upper—blue
59	42734-01 (892)	1	Sense hose lower—red
60	15338 (892)	1	Screw
61	23208 (892)	1	Lockwasher
62	42718 (892)	1	Transducer hose bracket
63	42741 (892)	2	Hose splice
64	38208 (892)	1	Air board assembly (early version)
65	42717 (892)	1	Air system pan
66	90354-06 (892)	3	Screw
67	39416 (892)	2	Bushing

Item Number	Part Number	Quantity	Description
68	38189 (892)	1	Quick coupling—0.250 male
69	39024 (892)	1	Quick coupling—female
70	17410 (892)	2	Snap bushing
71	42746 (892)	1	Hose guide
72	39027 (892)	1	Quick coupling—0.125 female
73	38187 (892)	1	Quick coupling—0.125 male
74	38283 (892)	1	Fitting elbow—90 degree
75	42743-01 (892)	1	Grommet
76	42728 (892)	1	Air system power cable
77	42736-01 (892)	1	Sense hose flex—red
78	42763 (892)	1	Manifold compressor assembly (early version)
79	46752 (892)	1	Air board assembly (current version)
80	43519 (892)†	1	VDE air board assembly (early version)
81	48606 (892)†	1	VDE air board assembly (current version)
82	47105-01 (892)	1	3 station manifold
83	42732-02 (892)	1	Fill hose upper—blue
84	4273203 (892)	1	Fill hose lower—red
85	47103 (892)	1	Muffler assembly
86	46981 (892)	3	Standoffs
87	46987 (892)	1	Compressor pan
88	15380 (892)	2	Screw
89	47020 (892)	4	Rivet
90	19124 (892)	3	Large cable tie
91	46980-07 (892)	1	Hose, air
92			
93	47124 (892)	1	Elbow fitting
94	46873 (892)	1	Pump to valve cable assembly
95	47067 (892)	1	Inter compressor cable assembly
96	4760604 (892)	1	Hose 3/8"
97	46918 (892)	1	Air pump assembly

Item Number	Part Number	Quantity	Description
98	47327 (892)	1	Manifold compressor assembly (current version)

† These parts are unique to European applications.

NOTES:

DynamicAire Sleep Surface Assembly—P913 and P914 (Accessory)

Figure 5-16. DynamicAire Sleep Surface Assembly—P913 and P914 (Accessory)

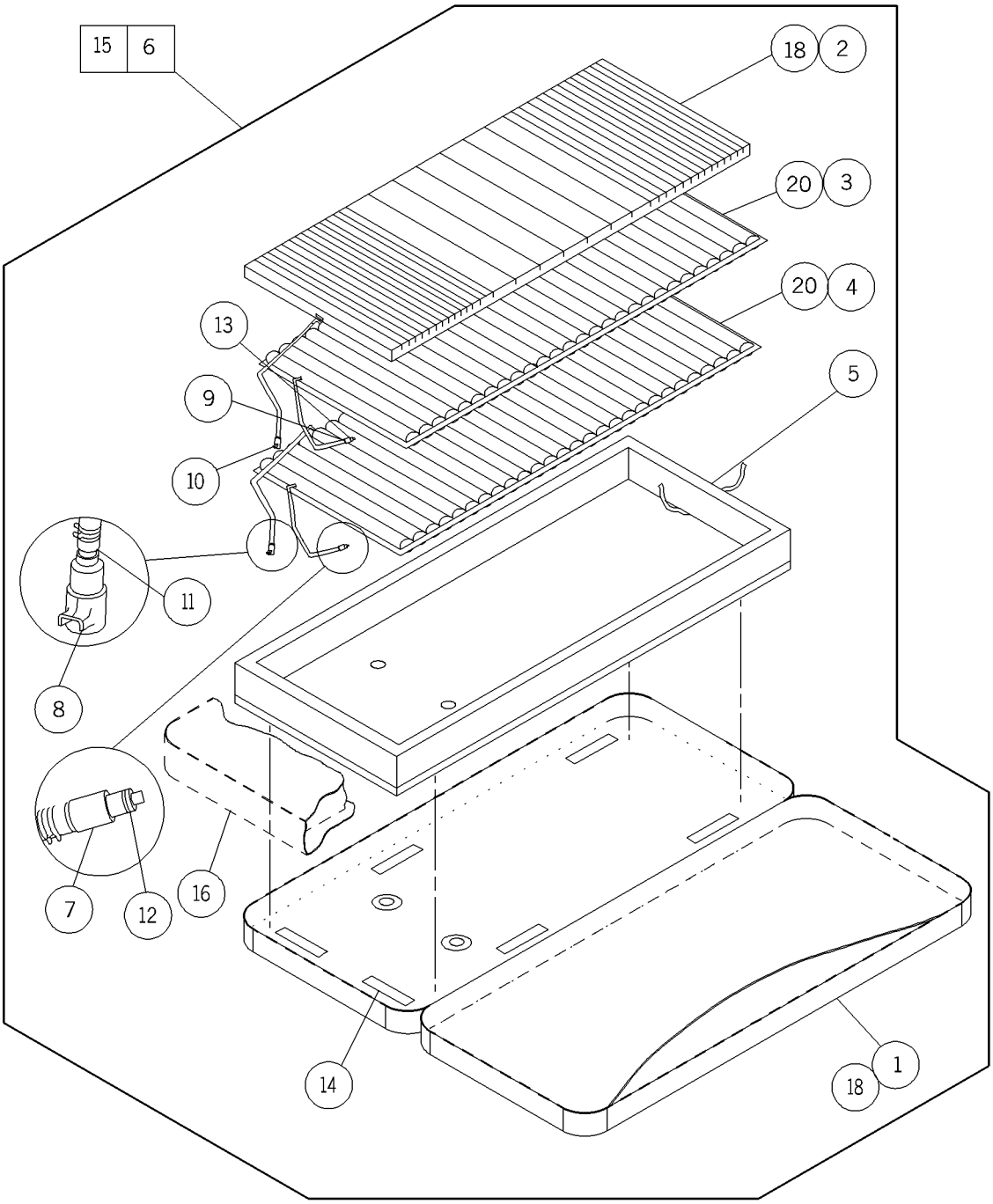

Table 5-19. DynamicAire Sleep Surface Assembly—P913 and P914 (Accessory)

Item Number	Part Number	Quantity	Description
1	SA4642 (892)	1	Ticking—P913C
2	SA4926 (892)	1	Special top foam—P913C
3	SA4644 (892)	1	Top bladder assembly
4	SA4645 (892)	1	Bottom bladder assembly
5	SA4901 (892)	1	Bottom foam assembly—P914C and P914E
6	P914C (892)	1	Complete mattress
7	SA4461 (892)	1	Male coupling—sleep surface (1/4")
8	SA4462 (892)	1	Female coupling—sleep surface (1/4")
9	SA4463 (892)	1	Male coupling—sleep surface (1/8")
10	SA4464 (892)	1	Female coupling—sleep surface (1/8")
11	38230 (892)	4	Hose clamp (green)
12	SA4584 (892)	2	Large o-ring
13	SA4583 (892)	2	Small o-ring
14	SA4589 (892)	6	Magnet
15	P914E (892)	1	Mattress complete
16	SA4902 (892)	1	Mattress liner—P914E
17			
18	SA7109 (892)	1	Top foam and ticking—P914
19	SA4646 (892)	1	Bottom foam assembly—P913C and P913E
20	SA4625 (892)	1	Bladder repair kit

† These parts are unique to European applications.

X-Ray Cassette Holder—P280A (Accessory)

Figure 5-17. X-Ray Cassette Holder—P280A (Accessory)

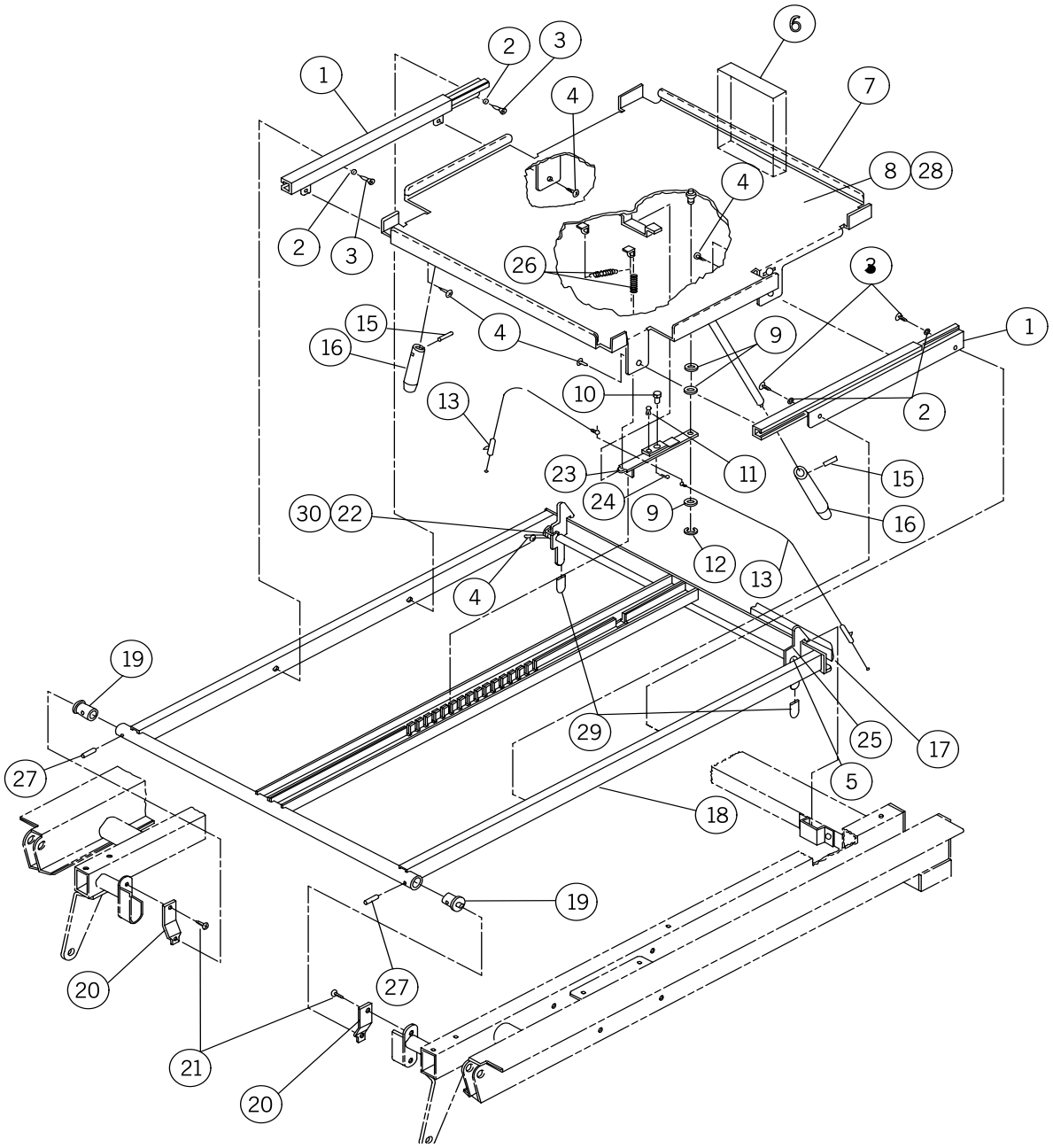

Table 5-20. X-Ray Cassette Holder—P280A (Accessory)

Item Number	Part Number	Quantity	Description
1	46269 (892)	2	Top slide
2	37500 (892)	4	Lockwasher
3	22400 (892)	4	Screw
4	18921 (892)	1	Screw
5	36905 (892)	1	Spring drum
6	36892 (892)	1	Caution label
7	38485 (892)	1	Tray welded assembly
8	36890 (892)	1	HPL insert assembly
9	9525 (892)	3	Washer
10	757 (892)	1	Connector pin
11	35911 (892)	1	Round plug
12	18890 (892)	1	Tru-arc ring
13	36901 (892)	2	Cable assembly
14			
15	10640 (892)	2	Roll pin
16	36893 (892)	2	Knob
17	36896 (892)	1	Foam pad
18	39610 (892)	1	Tray frame assembly
19	36339 (892)	2	Tube end
20	38621 (892)	2	Spring clip
21	393 (892)	2	Screw
22	35697 (892)	1	Spring
23	36040 (892)	1	Slide latch lever assembly
24	11094 (892)	1	Cotter pin
25	38487 (892)	1	Latch assembly
26	22610 (892)	2	Spring
27	9685 (892)	2	Roll pin
28	36891 (892)	1	HPL adhesive
29	36897 (892)	2	Latch sleeve
30	39028 (892)	1	Plastic washer

Oxygen Tank Holder—P274 (Accessory)

Figure 5-18. Oxygen Tank Holder—P274 (Accessory)

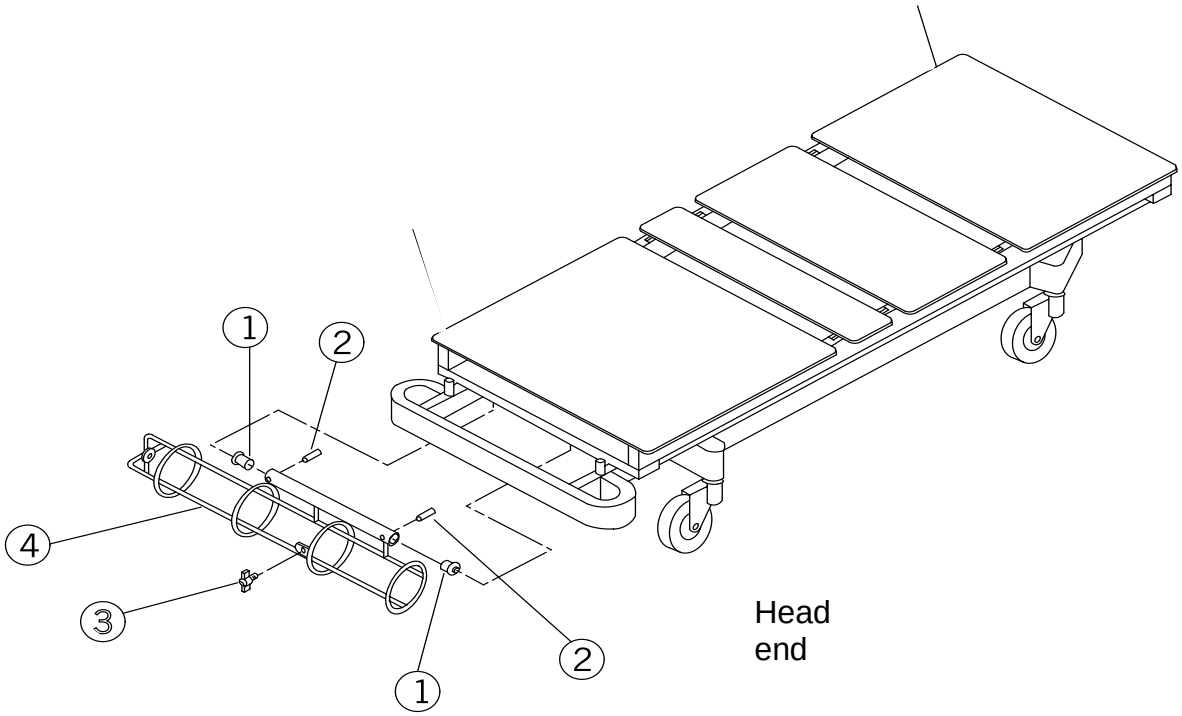

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Table 5-21. Oxygen Tank Holder—P274 (Accessory)

Item Number	Part Number	Quantity	Description
1	36339 (892)	2	Tube end
2	9685 (892)	2	Roll pin
3	38135 (892)	2	Knob assembly
4	42703 (892)	1	Oxygen tank holder

Cane Bumpers—P290-48 (Accessory)

Figure 5-19. Cane Bumpers—P290-48 (Accessory)

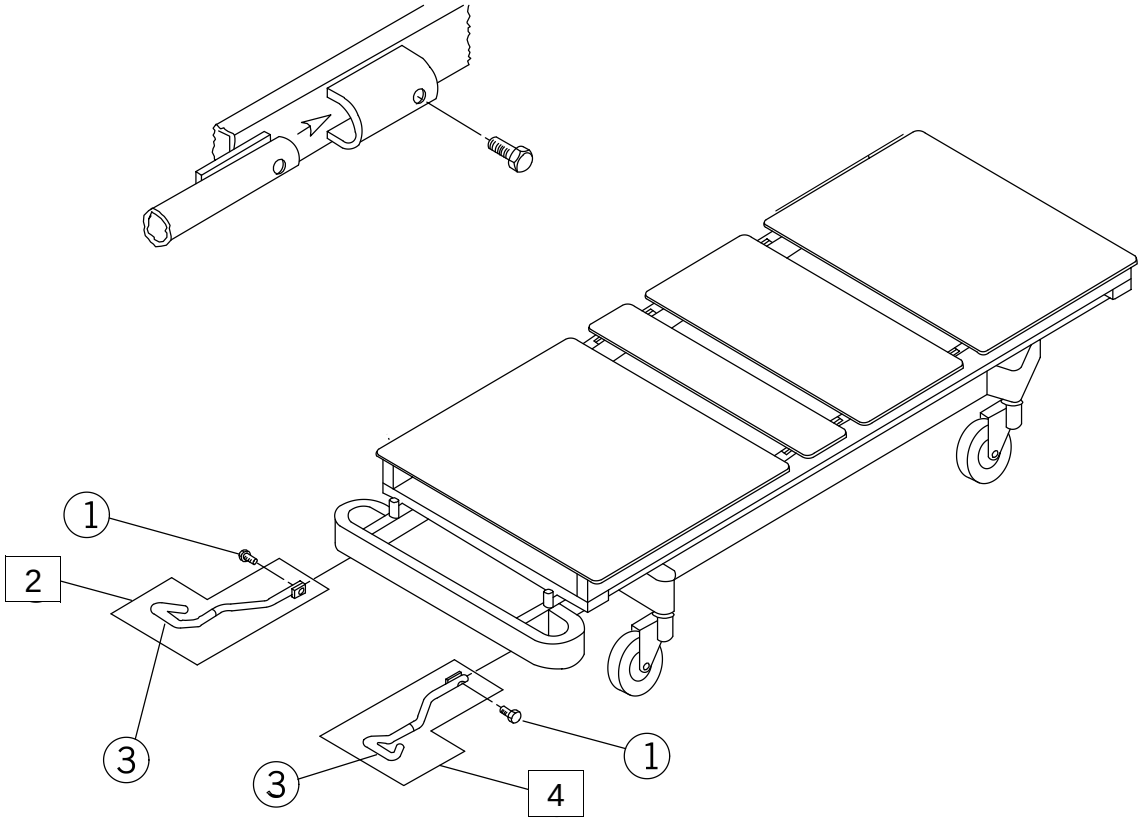

Table 5-22. Cane Bumpers—P290-48 (Accessory)

Item Number	Part Number	Quantity	Description
1	90016-20 (892)	2	Bolt
2	36011 (892)§	1	Bumper assembly complete—lh
3	34472 (892)	2	Sleeve
4	36010 (892)§	1	Bumper assembly complete—rh

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

Infusion Support System and Transducer Holder—P158, P159, and P294 (Accessory)

Figure 5-20. Infusion Support System and Transducer Holder—P158, P159, and P294 (Accessory)

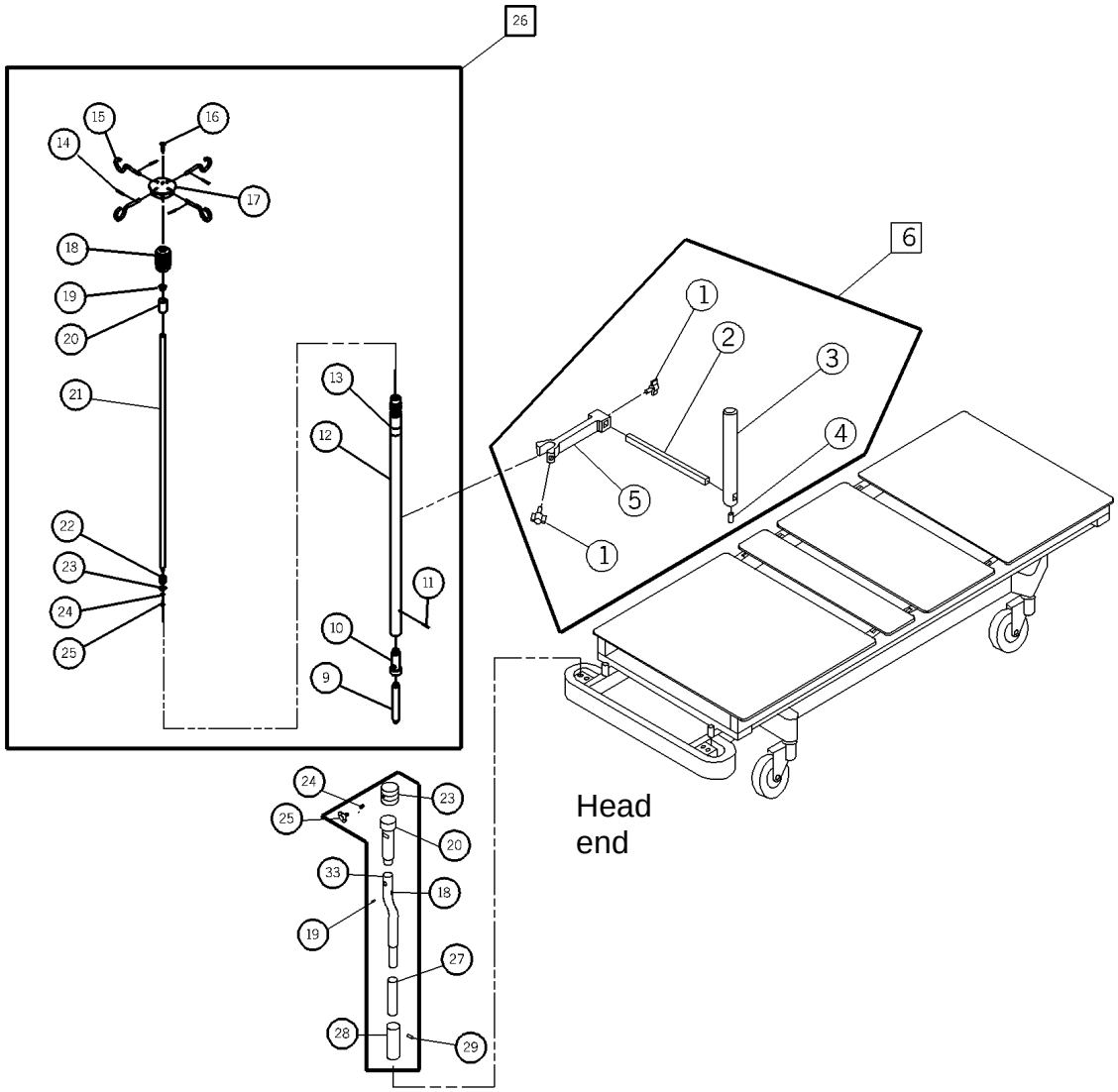

Table 5-23. Infusion Support System and Transducer Holder—P158, P159, and P294 (Accessory)

Item Number	Part Number	Quantity	Description
1	38135 (892)	2	Knob assembly
2	38742 (892)	1	Transducer mount extrusion rod
3	38744 (892)	1	Height adjustment rod
4	90301-16 (892)	1	Setscrew
5	38743 (892)	1	Transducer mount extrusion
6	P294 (892)	1	Transducer holder (assembly)
7	SA3780 (892)	1	Transfer pole, inner assembly
8	17290 (892)	1	Mounting screw
9	35001 (892)	1	Hub
10	35018 (892)	4	Roll pin
11	35003 (892)	4	IV hook
12	35026 (892)	1	Telescoping tube
13	35007 (892)	1	Ferrule complete
14	35004 (892)	1	Insert
15	35019 (892)	1	O-ring
16	864 (892)	1	Washer
17	SA3779 (892)	1	Base transfer pole (assembly)
18	35044 (892)	1	Label
19	35334 (892)	3	Spring pin
20	35022 (892)	1	Inner insulator
21	35005 (892)	1	Locator
22	P158 (892)	1	Transfer pole (assembly)
23	35023 (892)	2	Stanchion end
24	35012 (892)	1	Thread insert
25	38129 (892)	3	Chain and knob assembly
26	P159 (892)	1	Offset bar (assembly)
27	35008 (892)	1	Stiffener
28	35025 (892)	1	Outer insulator
29	35373 (892)	1	Roll pin

Trapeze Support Frame—P844C-48 (Accessory)

Figure 5-21. Trapeze Support Frame—P844C-48 (Accessory)

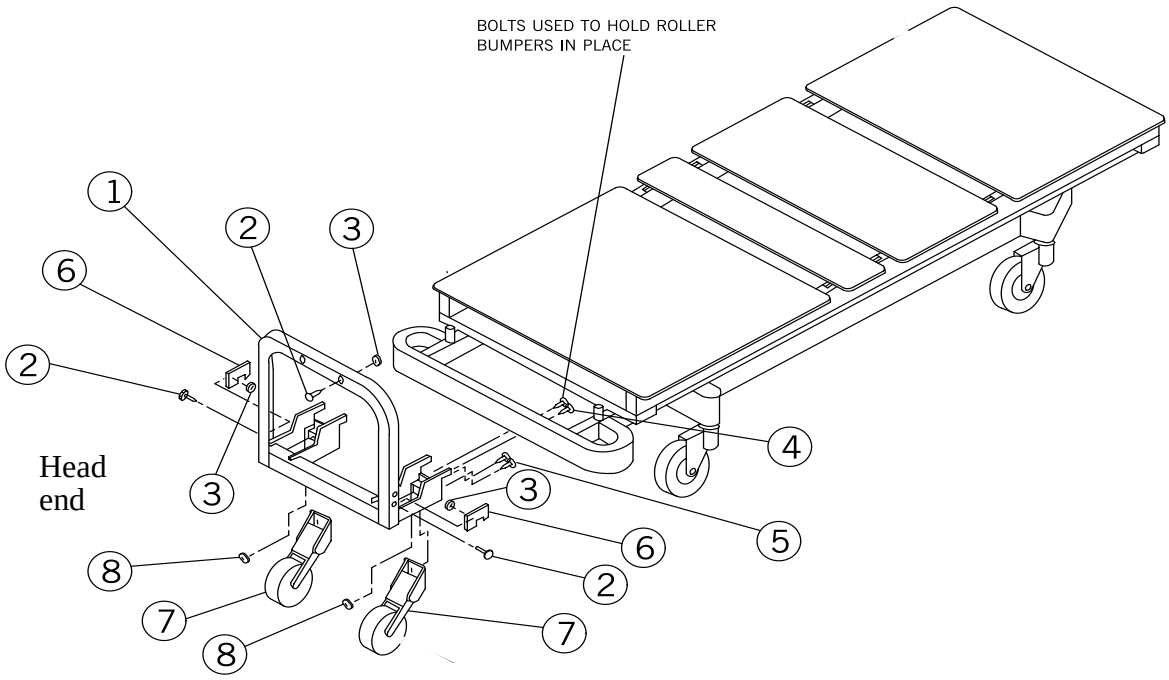

Table 5-24. Trapeze Support Frame—P844C-48 (Accessory)

Item Number	Part Number	Quantity	Description
1	36409 (892)§	1	Frame assembly
2	90018-10 (892)	6	Bolt
3	4435 (892)	6	Locknut
4	90016-24 (892)	4	Bolt
5	14538 (892)	4	Bolt
6	36408 (892)§	2	Support bracket
7	36005 (892)§	2	Roller bumper assembly
8	831 (892)	4	Locknut

§ Specify a dash number if the product color is:

Taupe (brown)	- 33
Light neutral (off-white)	- 48
Grey	- 50

IV Rod—P2218 (Accessory)

Figure 5-22. IV Rod—P2218 (Accessory)

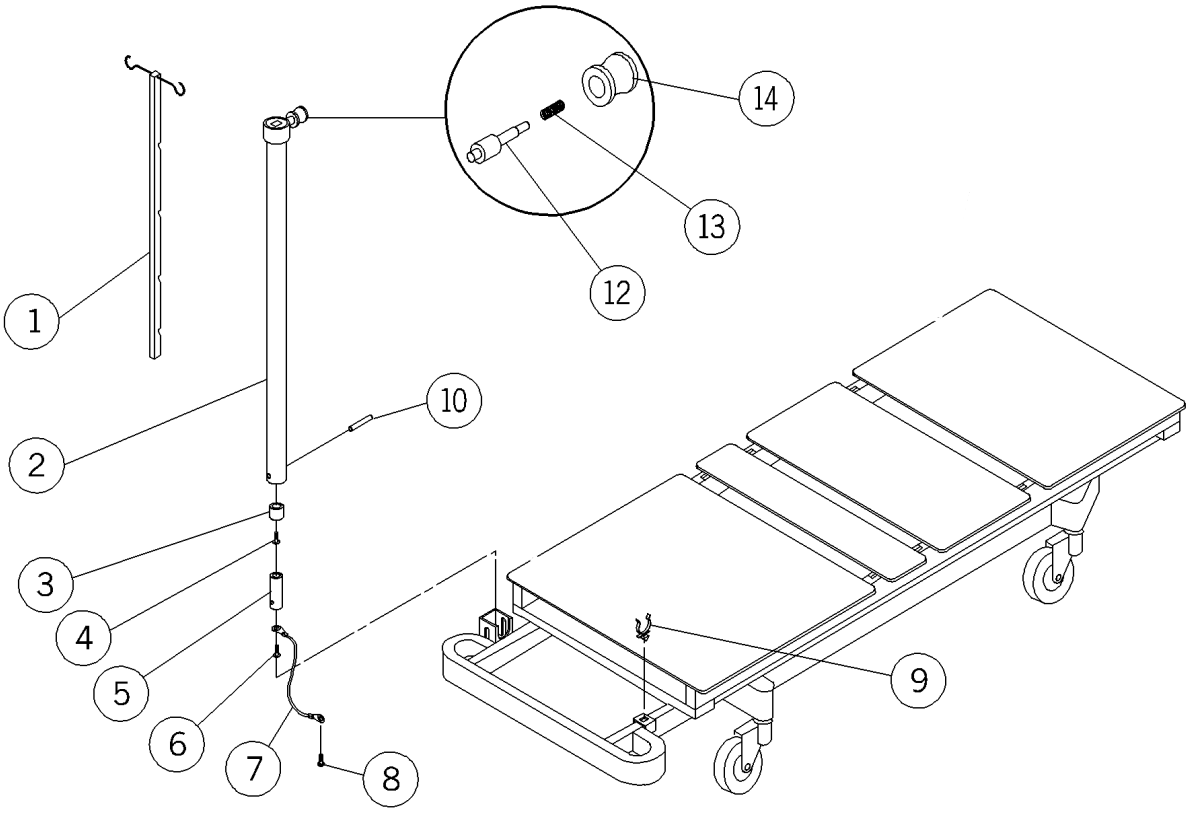

Table 5-25. IV Rod—P2218 (Accessory)

Item Number	Part Number	Quantity	Description
1	32534 (892)	1	Extension rod assembly
2	35777 (892)	1	Tube and bushing assembly
3	32202 (892)	1	Nylon guide
4	10866 (892)	1	Screw
5	35774 (892)	1	Ground plug
6	26762 (892)	1	Screw
7	35926 (892)	1	Ground strap assembly
8	18920 (892)	1	Screw
9	38960 (892)	1	Storage clip
10	142 (892)	1	Roll pin
11			
12	35775 (892)	1	Stop pin
13	2374 (892)	1	Lock spring
14	35776 (892)	1	Stop pin knob

P.C. Board Component Layout—Main Control Board

Figure 5-23. P.C. Board Component Layout—Main Control Board—P/N 36275

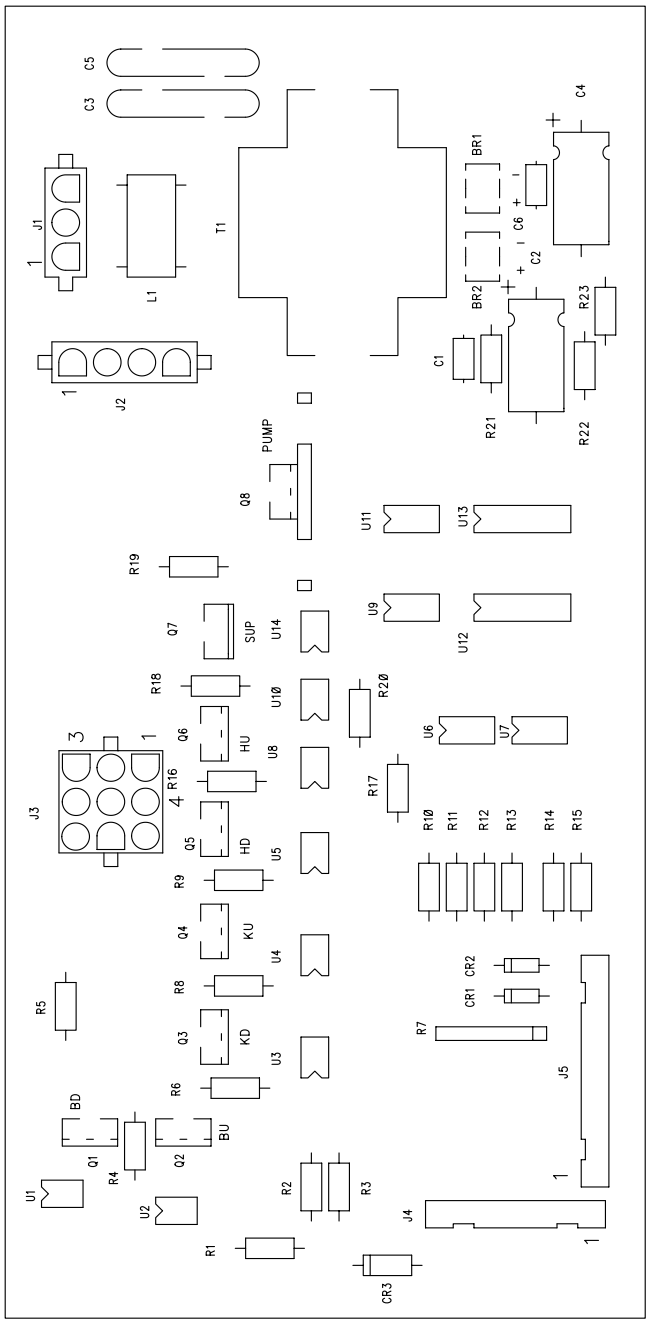

Table 5-26. P.C. Board Component Layout—Main Control Board—P/N 36275

Component Symbol	Part Number	Description
BR1, BR2	30205 (892)	Diode assembly
C1, C6	30109-333K (892)	Capacitor
C2, C4	30107 (892)	Capacitor—ASIC board
C3, C5	30103 (892)	Capacitor
CR1, CR2	30201-4003B (892)	Diode silicon
CR3	30202-6378 (892)	Voltage absorber
J1	30905 (892)	Connector
J2	30925 (892)	Socket header
J3	30906 (892)	Connector
J4	30956-12 (892)	Connector
J5	30956-16 (892)	Connector
L1	30610 (892)	Toroid assembly
Q1 through Q6	30323-02 (892)	Triac
Q7	90003-05 (892)	Triac—ASIC board
Q8	36840 (892)	Triac assembly—ASIC board
R1 through R3, R17, R20	30007-4715B (892)	Resistor
R4, R5, R6, R8, R9, R16, R18, R19	30013-1815B (892)	Resistor
R7	30012-472 (892)	Resistor
R10 through R15	30007-1055B (892)	Resistor
R21	30014 (892)	Resistor
R22	30007-1065B (892)	Resistor
R23	27316 (892)	Resistor
T1	30606 (892)	Power transformer
U1, through U5, U8, U14	30421 (892)	Optocoupler
U6, U7, U9, U11	30405-40107 (892)	Integrated circuit
U10	30420-3010 (892)	Integrated circuit
U12	30400-4069B (892)	Integrated circuit
U13	30400-4072B (892)	Integrated circuit

Figure 5-24. P.C. Board Component Layout—Main Control Board—P/N 35831

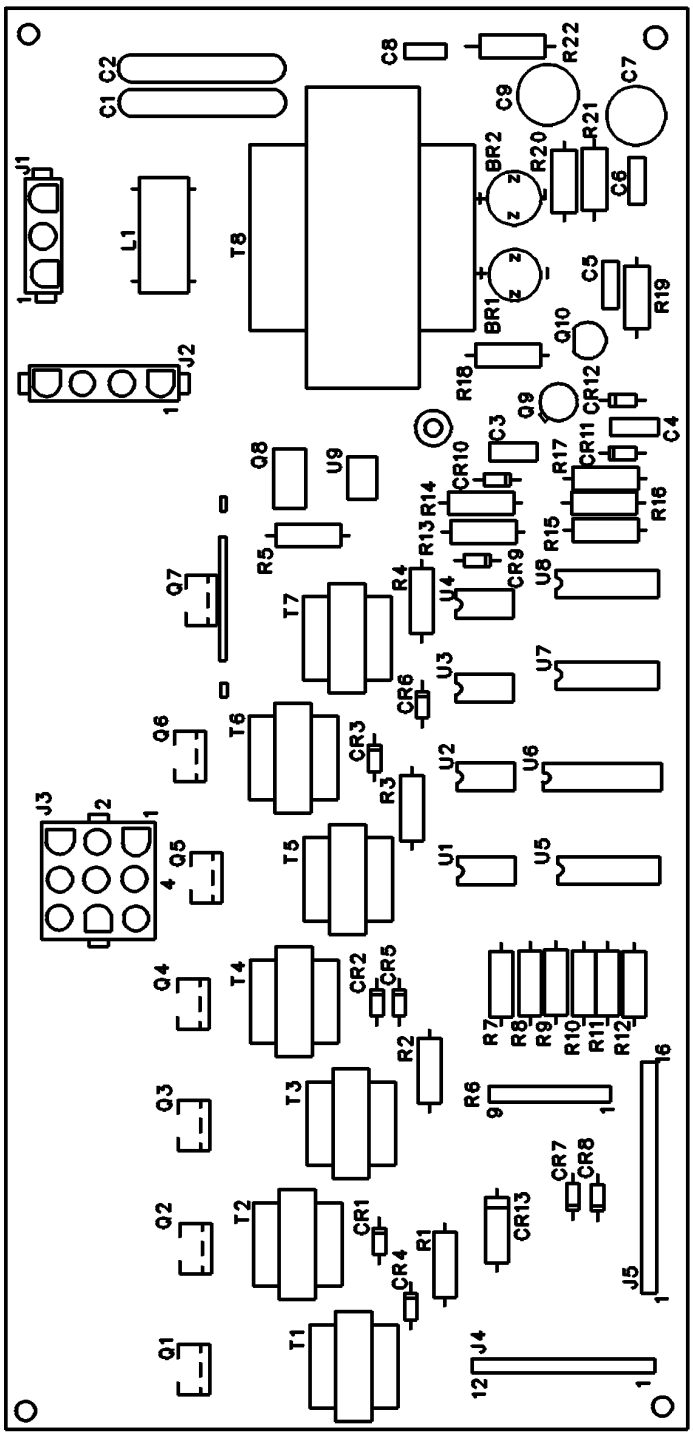

Table 5-27. P.C. Board Component Layout—Main Control Board—P/N 35831

Component Symbol	Part Number	Description
BR1, BR2	27314 (892)	Rectifier
C1, C2	30103 (892)	Capacitor
C3, C5, C6, C8	30101-333K (892)	Capacitor
C4	30101-122K (892)	Capacitor
C7, C9	27313 (892)	Capacitor
CR1 through CR12	30200-4148B (892)	Diode silicon
CR13	30202-6378 (892)	Voltage absorber
J1	30905 (892)	Connector
J2	30925 (892)	Socket header
J3	30906 (892)	Connector
J4	30956-12 (892)	Connector
J5	30956-16 (892)	Connector
L1	30610 (892)	Toroid assembly
Q1 through Q6	30323-02 (892)	Triac
Q7	35153 (892)	Triac assembly
Q8	90003-02 (892)	Triac
Q9	30310-2222A (892)	Transistor
Q10	30300-3904A (892)	Transistor
R1, R2, R3, R4	30007-8205B (892)	Resistor
R5	30002-1811B (892)	Resistor
R6	30010-472 (892)	Resistor network
R7 through R12	30007-1055B (892)	Resistor
R13	30007-4715B (892)	Resistor
R14	30007-5655B (892)	Resistor
R15	30007-3345B (892)	Resistor
R16	30007-1245B (892)	Resistor
R17	30007-1535B (892)	Resistor
R18	30007-4735B (892)	Resistor
R19	30007-4725B (892)	Resistor
R20	30007-1065B (892)	Resistor
R21	30014 (892)	Resistor
R22	27316 (892)	Resistor

Table 5-27. P.C. Board Component Layout—Main Control Board—P/N 35831

T1 through T7	30601 (892)	Pulse transformer
T8	30606 (892)	Power transformer
U1, U2, U3, U4	30405-40107 (892)	Integrated circuit
U5	30400-4069B (892)	Integrated circuit
U6	30410-40174 (892)	Integrated circuit
U7	30400-4072B (892)	Integrated circuit
U8	304400-4093B (892)	Integrated circuit
U9	30420-3010 (892)	Integrated circuit

NOTES:

P.C. Board Component Layout—Mattress Control Board

Figure 5-25. P.C. Board Component Layout—Mattress Control Board—P/N 38208

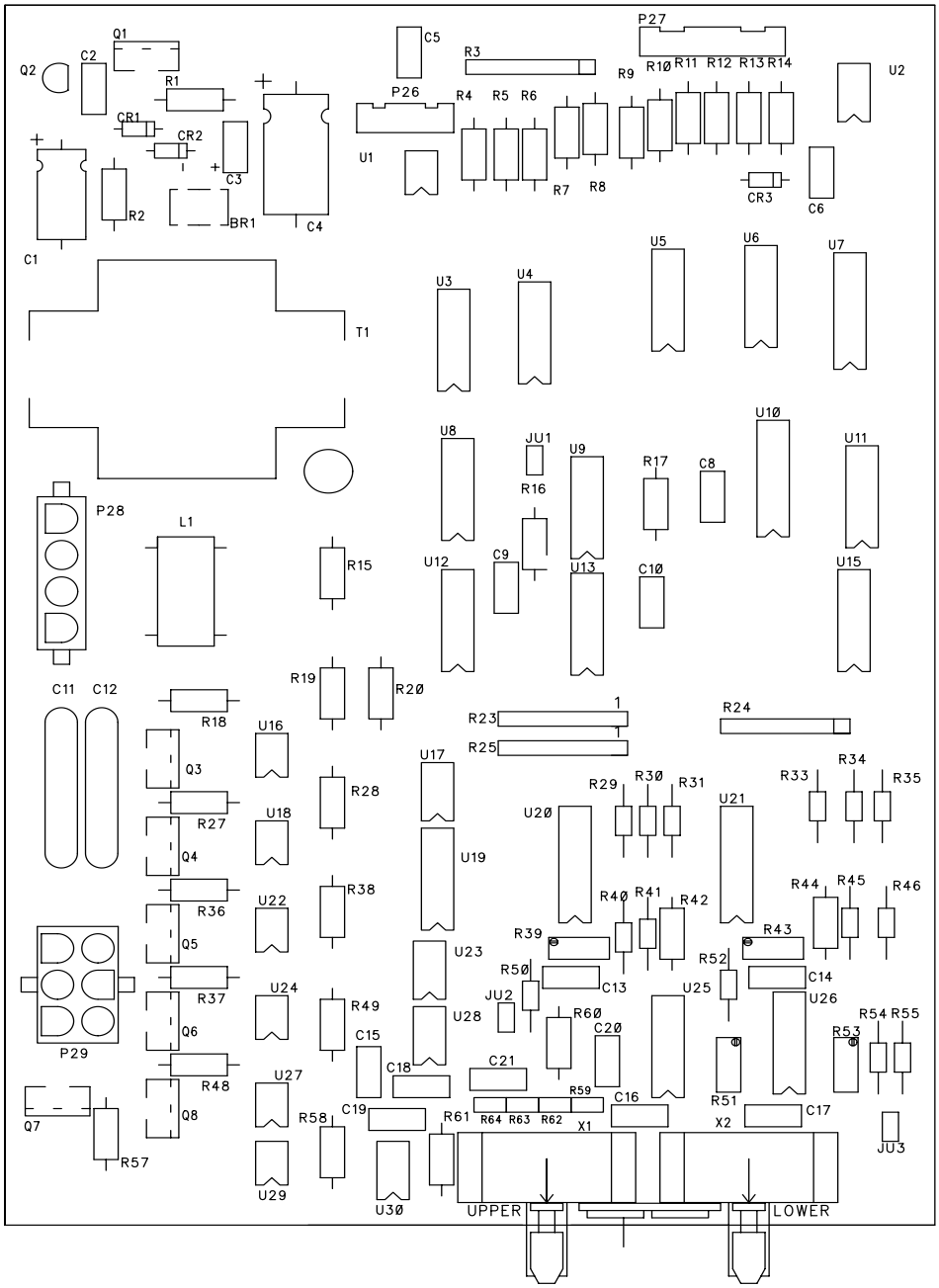

Table 5-28. P.C. Board Component Layout—Mattress Control Board—P/N 38208

Component Symbol	Part Number	Description
BR1	30205 (892)	Diode assembly
C1	30108 (892)	Capacitor
C2, C3	30111-105K (892)	Capacitor
C4	30107 (892)	Capacitor—ASIC board
C5, C, C6, C10, C13, through C17	30101-104K (892)	Capacitor—ASIC board
C11, C12	30103 (892)	Capacitor
C8, C18, C20	30101-474K (892)	Capacitor
C9, C19, C21	30101-224K (892)	Capacitor
CR1, CR2, CR3	30200-4148B (892)	Diode silicon
JU1, JU2, JU3	30982-2 (892)	Jumper
L1	30610 (892)	Toroid assembly
P26	30956-05 (892)	Connector
P27	30934 (892)	Connector
P28	30925 (892)	Socket header
P29	30921 (892)	Header—6 pin circuit
Q1	30315 (892)	Regulator
Q2	30316 (892)	Regulator
Q3	90003-02 (892)	Triac
Q4	90003-05 (892)	Triac—ASIC board
Q5 through Q8	30323-02 (892)	Triac
R1, R2	30014 (892)	Resistor
R3	30012-222 (892)	Resistor
R4	30007-2715B (892)	Resistor
R5 through R10, R12, R42, R44	30007-1045B (892)	Resistor
R11, R16, R17	30007-2755B (892)	Resistor
R13, R14	30007-221 (892)	Resistor
R15	30007-1065B (892)	Resistor
R18, R27, R36, R37, R48, R57	30013-1815B (892)	Resistor
R19, R20, R28, R38, R49, R58	30007-181 (892)	Resistor
R23	30018-273 (892)	Resistor
R24	30012-103 (892)	Resistor
R25	30018-105 (892)	Resistor

Component Symbol	Part Number	Description
R29	30019-1240B (892)	Resistor
R30	30019-2740B (892)	Resistor
R31	30019-2210B (892)	Resistor
R33	30019-3481B (892)	Resistor
R34	30019-1101B (892)	Resistor
R35	30019-5491B (892)	Resistor
R39, R43	30054-101 (892)	Potentiometer
R40	30019-1581B (892)	Resistor
R41	30019-2801B (892)	Resistor
R45, R46	30019-1004B (892)	Resistor
R50	30019-2000B (892)	Resistor
R51, R53	30054-104 (892)	Potentiometer
R52	30019-1000B (892)	Resistor
R54	30019-1003B (892)	Resistor
R55	30019-1503B (892)	Resistor
R60, R61	30007-2255B (892)	Resistor
T1	30606 (892)	Power transformer
U1	30419 (892)	Integrated circuit
U5, U8	30400-4071B (892)	Integrated circuit
U6	30400-4073B (892)	Integrated circuit
U7	30410-4049B (892)	Integrated circuit
U9	30400-4093B (892)	Integrated circuit
U10	30410-4040B (892)	Integrated circuit
U11	30400-4024B (892)	Integrated circuit
U3, U4, U12	30400-4081B (892)	Integrated circuit
U13	30400-40106 (892)	Integrated circuit
U15	30400-4013B (892)	Integrated circuit
U16	30420-3010 (892)	Integrated circuit
U2, U17, U23, U28	30405-40107 (892)	Integrated circuit
U18, U22, U24, U27, U29	30421 (892)	Optocoupler
U19	30400-4012B (892)	Integrated circuit
U20, U21	30403-LP365 (892)	Integrated circuit
U25, U26	30402-101HP (892)	Integrated circuit
U30	30406-1458 (892)	Integrated circuit

Component Symbol	Part Number	Description
X1, X2	30710 (892)	Transducer

Figure 5-26. P.C. Board Component Layout—Mattress Control Board—P/N 45904

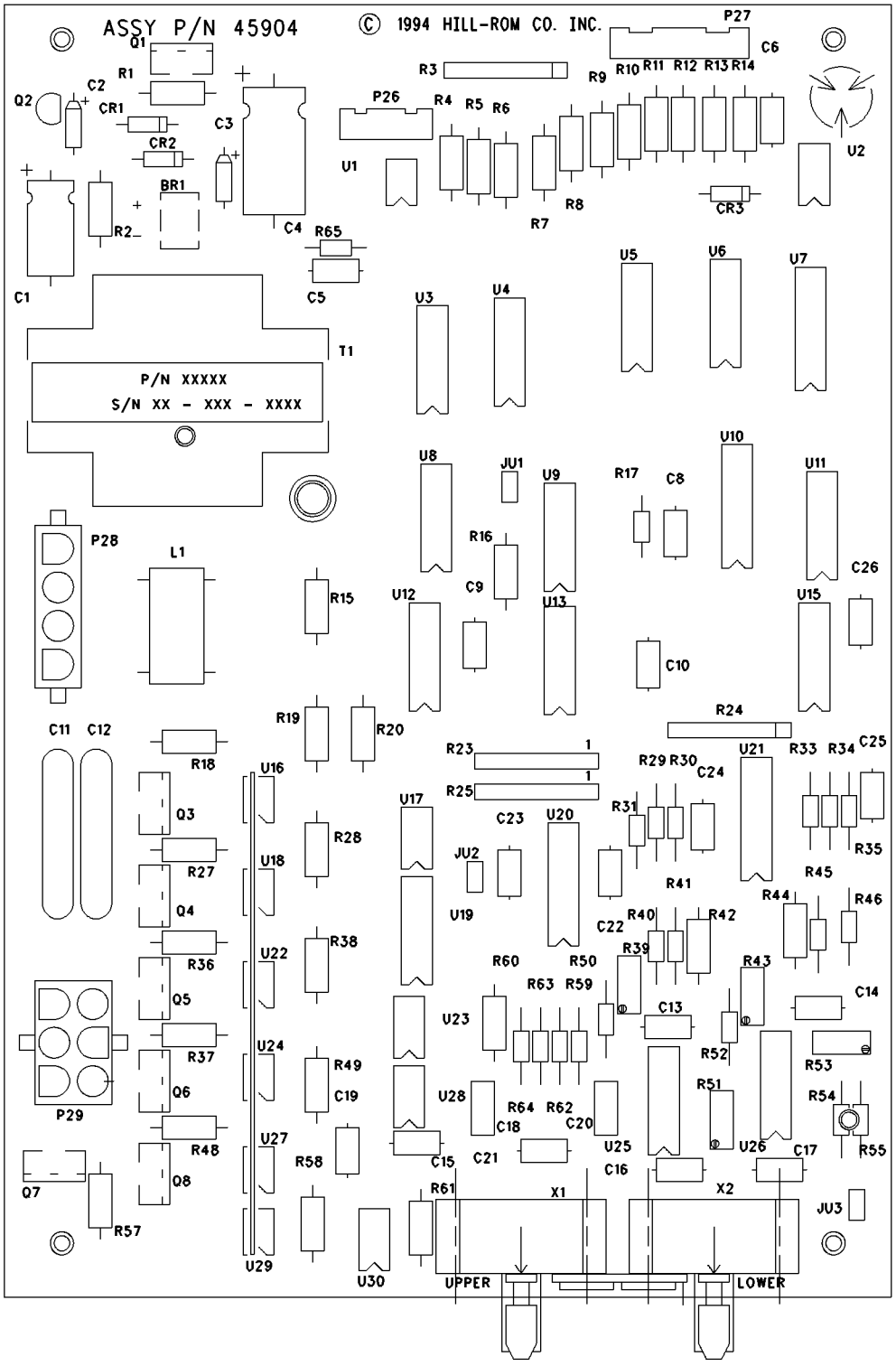

Table 5-29. P.C. Board Component Layout—Mattress Control Board—P/N 45904

Component Symbol	Part Number	Description
BR1	30205 (892)	Diode assembly
C1	30108 (892)	Capacitor
C2, C3	30144-105 (892)	Capacitor
C4	30107 (892)	Capacitor—ASIC board
C5, C6, C10, C13 through C17, C22 through C26	30109-104K (892)	Capacitor
C8	30109-334K (892)	Capacitor
C9, C19, C21	30109-224K (892)	Capacitor
C11, C12	30103 (892)	Capacitor
C18, C20	30101-474K (892)	Capacitor
CR1, CR2, CR3	30201-4003B (892)	Diode silicon
JU1, JU2, JU3	30982-2 (892)	Jumper
L1	30610 (892)	Toroid assembly
P26	30956-05 (892)	Connector
P27	30934 (892)	Connector
P28	30925 (892)	Socket header
P29	30921 (892)	Header—6 pin circuit
Q1	30315-9 (892)	Voltage regulator precision
Q2	30316-7 (892)	Voltage regulator—5V
Q3, Q4	90003-02 (892)	Triac
Q5 through Q8	30323-02 (892)	Triac
R1, R2	30014-8 (892)	Resistor
R3	30012-222 (892)	Resistor
R4	30007-271 (892)	Resistor
R5, R6 through R10, R12, R42, R44	30007-104 (892)	Resistor
R11, R16	30007-275 (892)	Resistor
R13, R14	30007-221 (892)	Resistor
R15	30007-106 (892)	Resistor
R17	30006-475 (892)	Resistor
R18, R27, R36, R37, R48, R57	30013-181 (892)	Resistor
R19, R20, R28, R38, R49, R58	30007-181 (892)	Resistor
R23	30018-273 (892)	Resistor

Component Symbol	Part Number	Description
R24	30012-103 (892)	Resistor
R25	30018-105 (892)	Resistor
R29	30019-1240B (892)	Resistor
R30	30019-2740B (892)	Resistor
R31	30019-2210B (892)	Resistor
R33	30019-3481B (892)	Resistor
R34	30019-1101B (892)	Resistor
R35	30019-5491B (892)	Resistor
R39, R43	30054-101 (892)	Potentiometer
R40	30019-1581B (892)	Resistor
R41	30019-2801B (892)	Resistor
R45, R46	30019-1004B (892)	Resistor
R50	30019-2000B (892)	Resistor
R51, R53	30054-104 (892)	Potentiometer
R52	30019-1000B (892)	Resistor
R54	30019-1003B (892)	Resistor
R55	30019-1503B (892)	Resistor
R59, R62, R63, R64	30019-1004B (892)	Resistor
R60, R61	30007-225 (892)	Resistor
R65	30016 (892)	Resistor
T1	30606 (892)	Power transformer
U1	30419 (892)	Integrated circuit
U2, U17, U23, U28	30405-40107 (892)	Integrated circuit
U3, U4, U12	30400-4081B (892)	Integrated circuit
U5, U8	30400-4071B (892)	Integrated circuit
U6	30400-4073B (892)	Integrated circuit
U7	30410-4049B (892)	Integrated circuit
U9	30400-4093B (892)	Integrated circuit
U10	30410-4040B (892)	Integrated circuit
U11	30400-4024B (892)	Integrated circuit
U13	30400-40106 (892)	Integrated circuit
U15	30400-4013B (892)	Integrated circuit
U16	30420-3010 (892)	Integrated circuit
U18, U22, U24, U27, U29	30421 (892)	Optocoupler

Component Symbol	Part Number	Description
U19	30400-4012B (892)	Integrated circuit
U20, U21	30403-LP365 (892)	Integrated circuit
U25, U26	30402-101HP (892)	Integrated circuit
U30	30406-1458 (892)	Integrated circuit
X1, X2	30710 (892)	Transducer

Figure 5-27. P.C. Board Component Layout—Mattress Control Board—P/N 44047-01

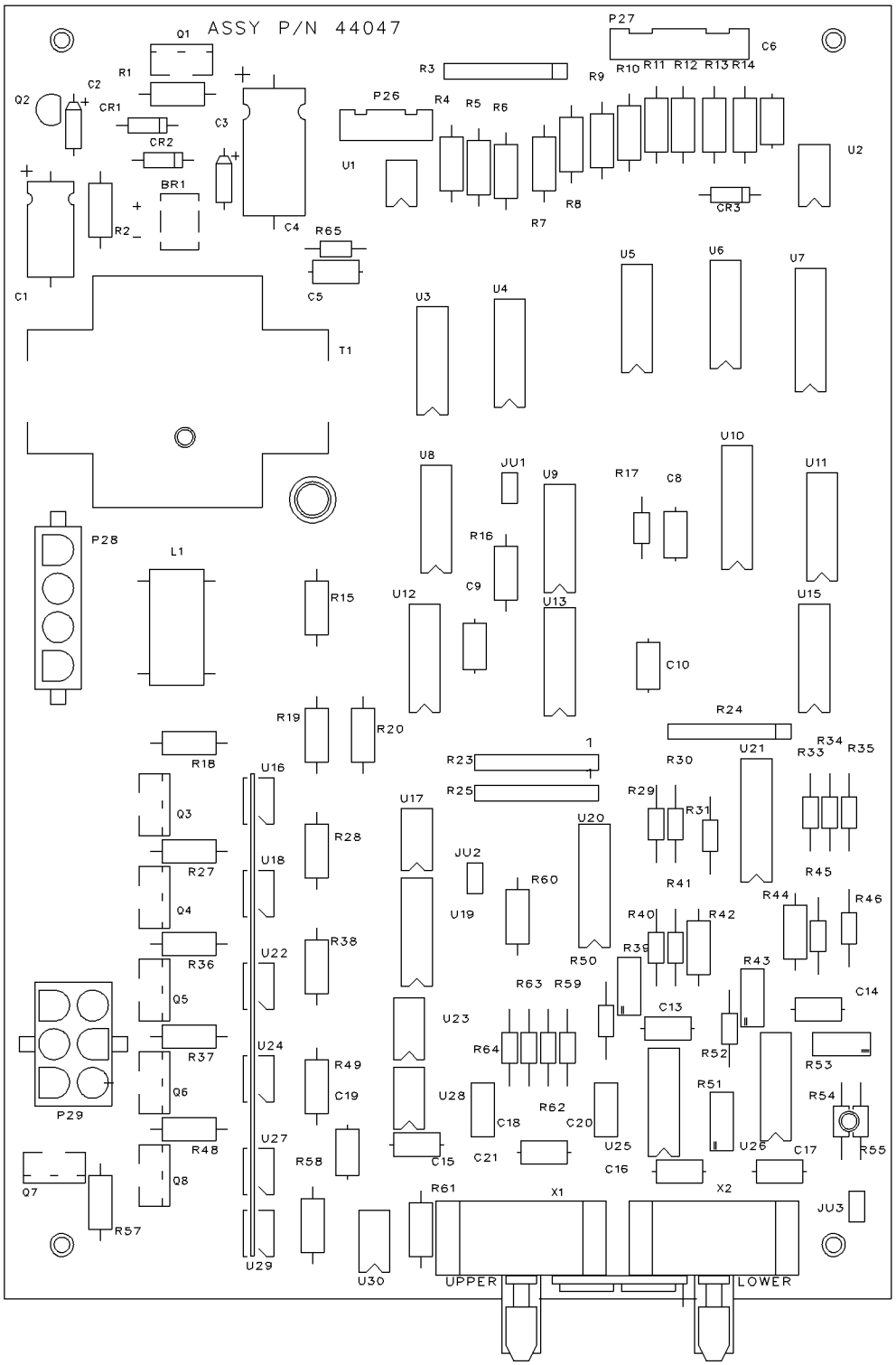

Table 5-30. P.C. Board Component Layout—Mattress Control Board—P/N 44047-01

Component Symbol	Part Number	Description
BR1	30205 (892)	Diode assembly
C1	30108 (892)	Capacitor
C2, C3	30144-105 (892)	Capacitor
C4	30107 (892)	Capacitor—ASIC board
C5, C6, C10, C13 through C17	30109-104K (892)	Capacitor
C8	30109-334K (892)	Capacitor
C9, C19, C21	30109-224K (892)	Capacitor
C18, C20	30101-474K (892)	Capacitor
CR1 through CR3	30201-4003B (892)	Diode silicon
JU1 through JU3	30982-2 (892)	Jumper
L1	30016 (892)	Resistor
P26	30956-05 (892)	Connector
P27	30934 (892)	Connector
P28	30925 (892)	Socket header
P29	30921 (892)	Header—6 pin circuit
Q1	30315 (892)	Regulator
Q2	30316 (892)	Regulator
Q3, Q4	90003-02 (892)	Triac
Q5 through Q8	30323-02 (892)	Triac
R1, R2	30014 (892)	Resistor
R3	30012-222 (892)	Resistor
R4	30007-271 (892)	Resistor
R5 through R10, R12, R42, R44	30007-104 (892)	Resistor
R11, R16	30007-275 (892)	Resistor
R13, R14	30007-221 (892)	Resistor
R15	30007-106 (892)	Resistor
R17	30006-475 (892)	Resistor
R18, R27, R36, R37, R48, R57	30013-181 (892)	Resistor
R19, R20, R28, R38, R49, R58	30007-181 (892)	Resistor
R23	30018-273 (892)	Resistor
R24	30012-103 (892)	Resistor
R25	30018-105 (892)	Resistor
R29	30019-1240B (892)	Resistor

Component Symbol	Part Number	Description
R30	30019-2740B (892)	Resistor
R31	30019-2210B (892)	Resistor
R33	30019-3481B (892)	Resistor
R34	30019-1101B (892)	Resistor
R35	30019-5491B (892)	Resistor
R39, R43	30054-101 (892)	Potentiometer
R40	30019-1581B (892)	Resistor
R41	30019-2801B (892)	Resistor
R45, R46	30019-1004B (892)	Resistor
R50	30019-2000B (892)	Resistor
R51, R53	30054-104 (892)	Potentiometer
R52	30019-1000B (892)	Resistor
R54	30019-1003B (892)	Resistor
R55	30019-1503B (892)	Resistor
R59, R62 through R64	30019-1004B (892)	Resistor
R60, R61	30007-225 (892)	Resistor
T1	30606 (892)	Power transformer
U1	30419 (892)	Integrated circuit
U2, U17, U23, U28	30405-40107 (892)	Integrated circuit
U3, U4, U12	30400-4081B (892)	Integrated circuit
U5, U8	30400-4071B (892)	Integrated circuit
U6	30400-4073B (892)	Integrated circuit
U7	30410-4049B (892)	Integrated circuit
U9	30400-4093B (892)	Integrated circuit
U10	30410-4040B (892)	Integrated circuit
U11	30400-4024B (892)	Integrated circuit
U13	30400-40106 (892)	Integrated circuit
U15	30400-4013B (892)	Integrated circuit
U16	30420-3010 (892)	Integrated circuit
U18, U22, U24, U27, U29	30421 (892)	Optocoupler
U19	30400-4012B (892)	Integrated circuit
U20, U21	30403-LP365 (892)	Integrated circuit
U25, U26	30402-101HP (892)	Integrated circuit
U30	30406-1458 (892)	Integrated circuit

Component Symbol	Part Number	Description
X1, X2	30710 (892)	Transducer

Figure 5-28. P.C. Board Component Layout—Mattress Control Board—P/N 46752

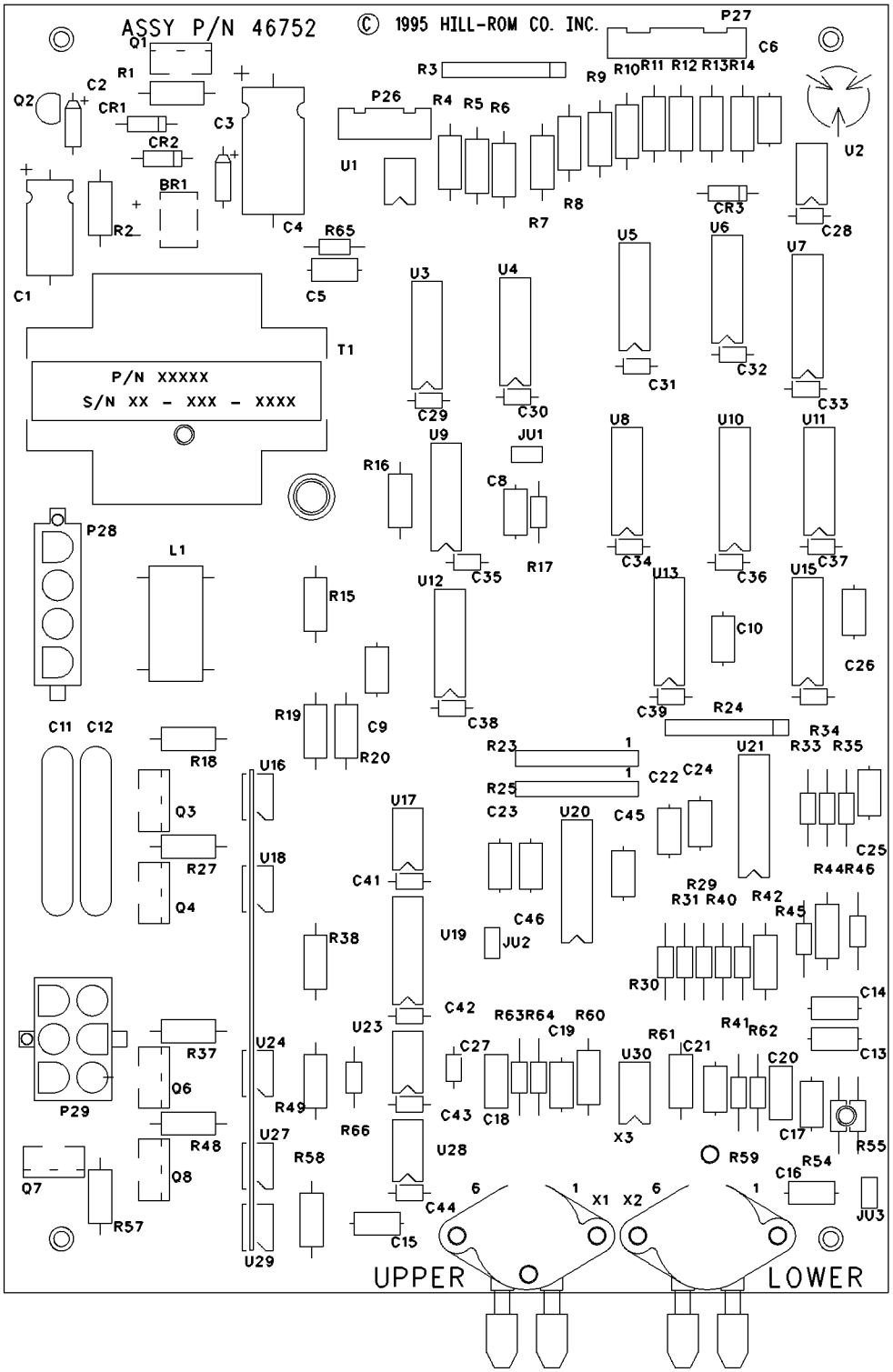

Table 5-31. P.C. Board Component Layout—Mattress Control Board—P/N 46752

Component Symbol	Part Number	Description
BR1	30205 (892)	Diode assembly
C1	30108 (892)	Capacitor
C2, C3	30144-105 (892)	Capacitor
C4	30107 (892)	Capacitor—ASIC board
C5, C6, C10, C13 through C17, C22 through C26, C45, C46	30109-104K (892)	Capacitor
C8	30109-334K (892)	Capacitor
C9, C19, C21	30109-224K (892)	Capacitor
C11, C12	30103 (892)	Capacitor
C18, C20	30101-474K (892)	Capacitor
C27 through C44	30109-473K (892)	Capacitor
CR1 through CR3	30201-4003B (892)	Diode silicon
JU1 through JU3	30982-2 (892)	Jumper
L1	30610 (892)	Toroid assembly
P26	30956-05 (892)	Connector
P27	30934 (892)	Connector
P28	43145-04 (892)	Connector
P29	47018 (892)	Connector, PC board
Q1	30315-9 (892)	Voltage regulator precision
Q2	30316-7 (892)	Voltage regulator—5V
Q3, Q4	90003-02 (892)	Triac
Q6 through Q8	30323-02 (892)	Triac
R1, R2	30014 (892)	Resistor
R3	30012-222 (892)	Resistor
R4	30007-271 (892)	Resistor
R5 through R10, R12, R42, R44	30007-104 (892)	Resistor
R11, R16	30007-275 (892)	Resistor
R13, R14	30007-221 (892)	Resistor
R15	30007-106 (892)	Resistor
R17	30006-475 (892)	Resistor
R18, R27, R37, R48, R57	30013-181 (892)	Resistor
R19, R20, R38, R49, R58	30007-181 (892)	Resistor
R23	30018-273 (892)	Resistor

Component Symbol	Part Number	Description
R24	30012-103 (892)	Resistor
R25	30018-105 (892)	Resistor
R29	300193090 (892)	Resistor
R30	300196650 (892)	Resistor
R31	300199530 (892)	Resistor
R34	300195900 (892)	Resistor
R35	300196651 (892)	Resistor
R40	300193921 (892)	Resistor
R41	300194121 (892)	Resistor
R45, R46, R59, R62 through R64	300191004 (892)	Resistor
R54	30006-473 (892)	Resistor, 47K 1/4w
R55	30006-104 (892)	Resistor
R60, R61	30007-7225 (892)	Resistor
R65	30016 (892)	Resistor
R66	30006-154 (892)	Resistor
T1	30606 (892)	Power transformer
U1	30419 (892)	Integrated circuit
U2, U17, U23, U28	30405-40107 (892)	Integrated circuit
U3, U4, U12	30400-4081B (892)	Integrated circuit
U5, U8, U19	30400-4071B (892)	Integrated circuit
U6	30400-4073B (892)	Integrated circuit
U7	30410-4049B (892)	Integrated circuit
U9	30400-4093B (892)	Integrated circuit
U10	30410-4040B (892)	Integrated circuit
U11	30400-4024B (892)	Integrated circuit
U13	30400-40106 (892)	Integrated circuit
U15	30400-4013B (892)	Integrated circuit
U16	30420-3010 (892)	Integrated circuit
U18, U24, U27, U29	30421 (892)	Optocoupler
U20, U21	30403-LP365 (892)	Integrated circuit
U30	30406-1458 (892)	Integrated circuit
X1, X2	46749 (892)	Sensor, pressure

NOTES:

P.C. Board Component Layout—Junction Box—P/N 38350

Figure 5-29. P.C. Board Component Layout—Junction Box—P/N 38350

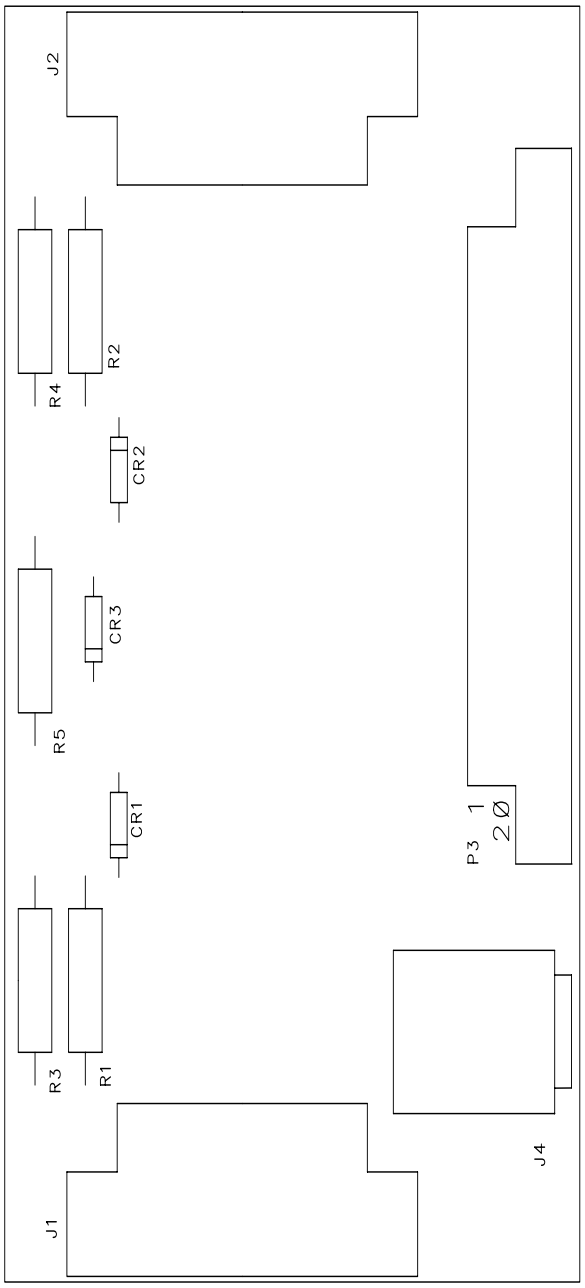

Table 5-32. P.C. Board Component Layout—Junction Box—P/N 38350

Component Symbol	Part Number	Description
CR1, CR2, CR3	30201-4003B (892)	Diode silicon
J1, J2	38346 (892)	Receptacle
J4	38347 (892)	Phone jack
P3	38345 (892)	Plug
R1, R2, R3, R4	30003-2025B (892)	Resistor
R5	30003-1831B (892)	Resistor

P.C. Board Component Layout—Nurse Control—P/N 35650

Figure 5-30. P.C. Board Component Layout—Nurse Control—P/N 35650

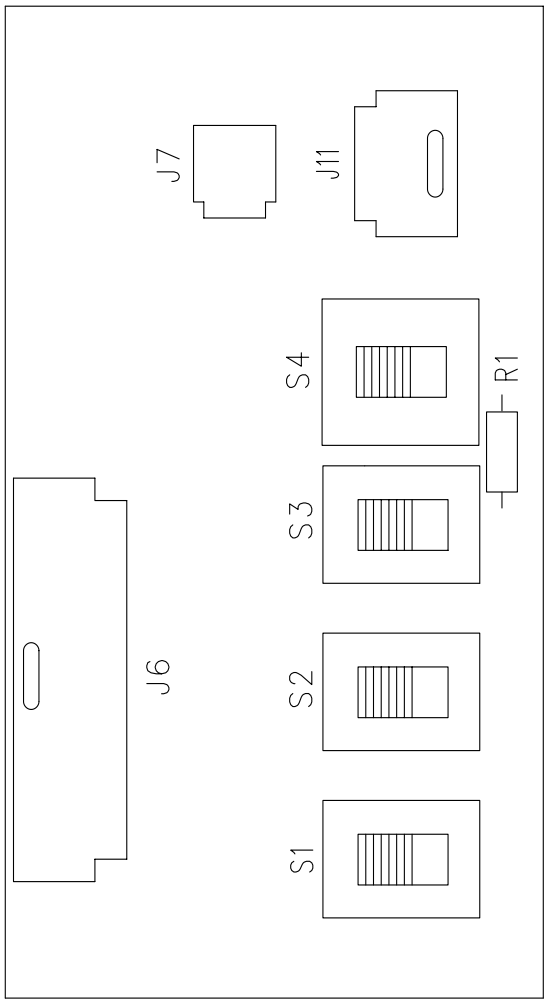

Table 5-33. P.C. Board Component Layout—Nurse Control—P/N 35650

Component Symbol	Part Number	Description
J6	30957-16 (892)	Right angle header—16 pin
J7	30957-03 (892)	Right angle header—3 pin
J11	30957-06 (892)	Right angle header—6 pin
R1	30007-4715B (892)	Resistor
S1, S2, S3	30810 (892)	Switch—lockout
S4	30809 (892)	Switch—lockout

NOTE:
For Wiring Diagram see P/N 42760.

Motor Assemblies

Table 5-34. Motor Assemblies

Type	Manufacturer	Model Number	Capacitor
Pump motor	Emerson	K33XYBWE-804	40435 (892)
Pump motor	Barnes	1460031	42301 (892)

Connectors and Terminals—P.C. Boards

Master P.C. Board P/N 36275—All Models

Table 5-35. Master P.C. Board P/N—All Models

Board Location	Board Connector	Mating Connector	Terminal
J1	30905 (892)	30913 (892)	30950 (892)
J2	30925 (892)	30923 (892)	30951 (892)
J3	30906 (892)	30919 (892	30950 (892)
J4	30956-12 (892)	30955-12 (892)	30952 (892)
J5	30956-16 (892)	30955-16 (892)	30952 (892)

Mattress P.C. Board P/N 38208

Table 5-36. Master P.C. Board P/N 38208

Board Location	Board Connector	Mating Connector	Terminal
P26	30956-05 (892)	None	None
P27	30934 (892)	30955-08 (892)	30952 (892)
P28	30925 (892)	30923 (892)	30951 (892)
P29	30921 (892)	30924 (892)	30950 (892)

Nurse Control P.C. Board P/N 35650

Table 5-37. Nurse Control P.C. Board P/N 35650

Board Location	Board Connector	Mating Connector	Terminal
J6	30957-16 (892)	30955-16 (892)	30952 (892)

Board Location	Board Connector	Mating Connector	Terminal
J7	30957-03 (892)	30955-03 (892)	30952 (892)
J11	30957-06 (892)	30955-06 (892)	30952 (892)

SideCom Communication System Junction Box P.C. Board P/N 38350

Table 5-38. SideCom Communication System Junction Box P.C. Board P/N 38350

J-Box Location	J-Box Connector	Mating Plug	Terminal
25 Position receptacle	38346 (892)	28885 (892)	28883 (892)
37 Position receptacle	38345 (892)	40879 (892)	None
Phone jack	28665 (892)	None	None

Other Connectors and Terminals

Pump Motor

Table 5-39. Pump Motor

Motor	Harness	Motor	Assembly
Connector P/N	**Terminal P/N**	**Connector P/N**	**Terminal P/N**
30913 (892)	30950 (892)	30914 (892)	30951 (892)

Scale Unit

Table 5-40. Scale Unit

Scale Unit Location	Mating Connector	Terminal
J15	30955-04 (892)	30952 (892)
J13	30955-10 (892)	30952 (892)

Automatic Contour Connection P/N 35508-48

Table 5-41. Auto-Contour Connection P/N 35508-48

Contour Assembly Connector	Terminal	Mating Connector	Terminal
30929 (892)	22154 (892)	30930 (892)	22153 (892)

Siderail Bed Control Cable Connection (Both Sides of Bed) P/N 35503

Table 5-42. Siderail Bed Control Connection (Both Sides of Bed) P/N 35503

Siderail Plug	Siderail Terminal	Mating Receptacle	Terminal
22151 (892)	22153 (892)	22152 (892)	22154 (892)

Other Terminals

Table 5-43. Other Terminals

Location	Terminal Number
Solenoid	30962 (892)
Master lockout switch	30961 (892)
Battery	36119 (892)

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Siderail Assemblies Complete

Table 5-44. Siderail Assemblies Complete

Siderail Option	LH Siderail	LH Communication Housing Front	RH Siderail	RH Communication Housing Front
50	38364-48 (892)	None	38365-48 (892)	None
51	42854 (892)	43068 (892)	42855 (892)	43068 (892)
52	42864 (892)	42906 (892)	42865 (892)	42906 (892)

Siderail Option	LH Siderail	LH Communication Housing Front	RH Siderail	RH Communication Housing Front
53	42852 (892)	42906 (892)	42853 (892)	42906 (892)
59	42866 (892)	43068 (892)	42867 (892)	43068 (892)
60	38364-48 (892)	None	38365-48 (892)	None
63	42852 (892)	42906 (892)	42853 (892)	42906 (892)

NOTES:

Chapter 6
General Procedures

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6

NOTES:

General Information

WARNING:
Unplug the unit from its power source.

WARNING:
Powered bed mechanisms can cause serious injury. Operate the bed only when persons are clear of the mechanisms.

If it is necessary to work under the sleep surface or work with the bed in the high position, you must block the hydraulic cylinder and set the brakes. Refer to “Hilow Cylinder Block” on page 4-7.

Whenever the foot section of the sleep surface is folded back toward the head section, use the straps provided with the foot panel to secure the foot section.

Cleaning and Care

General Instructions

Do not use excessive fluids around the switches in the siderails and the nurse control panel. Do not steam clean the bed. The excessive moisture will result in electrical component damage.

CAUTION:
Do not use excessive water around the switches in the siderails and nurse control panel. Moisture on the switches can result in an electrical short or major damage to the electrical components.

Clean the Century CC Bed with warm water, a mild detergent, and a damp sponge or cloth. Any standard household cleaner may be used. To disinfect the bed, use a phenolic or quarternary type cleaner. Follow all of the manufacturer’s instructions for use and dilution of cleaning and disinfecting products.

DynamicAire Sleep Surface Cleaning

In addition to the general instructions, you can use household bleach to disinfect. Dilute the bleach to a concentration not greater than one part bleach to ten parts water.

Fluid Spills

Wipe up fluid spills as soon as possible to reduce the potential for stain. Fluids such as betadine will leave a permanent stain. Standard household cleaners combined with vigorous rubbing with a damp cloth or sponge will normally remove temporary stains. Follow all of the manufacturer's instructions for use and dilution of cleaning and disinfecting products.

Wipe up excess cleaning solutions. Damp areas can take 15-30 minutes to dry.

Blood and Excreta

If possible, remove blood and excreta while they are wet. It is harder to remove them after they dry.

In addition to the general instructions, you must rinse the cloth or sponge frequently. You may need to rinse up to ten times or more. Continue the procedure until no evidence of blood or excreta is present on the cloth or sponge after wiping. Wipe the surface a final time with clean disinfectant and a clean cloth or sponge. Follow all of the manufacturer's instructions for use and dilution of cleaning and disinfecting products.

Let the ticking dry completely (approximately 30-60 minutes).

Comfortline CC Mattress Cleaning

The Hill-Rom Comfortline CC mattress uses a fabric based ticking for patient comfort and to reduce interface pressure. It may be cleaned and disinfected with those products normally used by the hospital to clean mattresses with fabric based ticking.

Direct, prolonged exposure to blood can cause discoloration of the surface. However, if you clean and disinfect the surface, it will prevent microbial growth. Follow all of the manufacturer's instructions for use and dilution of cleaning and disinfecting products.

6

Lubrication Requirements

Hill-Rom uses high load bearing material at all pivot points on the Century CC Bed. These pivot points will not normally need any additional lubrication. All drive mechanisms such as cylinders, valves, pumps, and manifold are constantly lubricated as oil flows through the hydraulic system.

If siderail pivots become stiff, apply M1 Penetrating Oil, Hill-Rom P/N 8252, to the upper pivot points in the small hole on the underside of the pivot.

The black slide rods in the siderails might need lubrication occasionally. When needed, use Teflon Spray Lubricant (dry), Hill-Rom P/N SA0646.

Hydraulic Fluid

The hydraulic system in the Century CC Bed is a closed system and does not need fluid refill as a part of preventive maintenance. If enough fluid is spilled while replacing hydraulic system components to require fluid replacement, use only hydraulic fluid P/N 36199S supplied by Hill-Rom. Failure to do so could void the warranty if damage occurs as a result of using the wrong replacement fluids.

Preventive Maintenance

The Century CC Bed must have an effective maintenance program. We recommend that you perform preventative maintenance and testing for Joint Commission on Accreditation of Healthcare Organizations (JCAHO) semi-annually. This not only meets JCAHO requirements, but will help to ensure a long and productive life for the Century CC Bed. This will help minimize downtime due to excessive wear failures.

The preventative maintenance schedule that follows is intended to guide the technician through a normal preventative maintenance procedure on the Century CC Bed. Check each item on the schedule, and make any necessary adjustments during the preventative maintenance process.

The preventative maintenance schedule is intended to be used in conjunction with the preventative checklist following it. This checklist is designed to keep a running history of maintenance and subsequent repair costs for one individual Century CC Bed. However, the facility can modify this checklist or invent another to fit their needs. Keeping close records and maintaining the Century CC Bed and its accessories are two good ways of reducing downtime and at the same time, keeping the nursing staff happy and efficient.

Table 6-1. Preventative Maintenance Schedule

Function	Procedure
Contour limit	With the bed sleep surface in the flat position, raise the head section to the high position. The knee section should raise to 14° to form a contour position for the patient. Lower the head section. The knee section should start going down when the head section is lowered to 25°. This function is deactivated by the contour lockout switch. If the automatic contour feature is not in adjustment, refer to "Automatic Contour Switch" on page 4-91.
Trendelenburg limits	Activate the Trendelenburg and Reverse Trendelenburg functions by depressing the release handles at the foot end of the bed. The bed should then move freely. If a gas cylinder is faulty, refer to "Gas Cylinder" on page 4-87. Inspect the degree indicator(s) located on the nurse control panel for accuracy. If adjustment is needed, refer to "Trendelenburg Indicator and Adjustment" on page 4-70. Lubricate the cylinder castings to ensure smooth operation of the Trendelenburg.
Head cylinders	Check for full travel of the head section. Inspect the cylinders for residual fluid. Check the fittings for leaks. If a head cylinder is faulty, refer to "Head Cylinder" on page 4-40. Inspect the angle of head elevation indicator for accuracy.
Knee cylinder	Check for full travel of the knee section. Inspect for residual fluid. Inspect the fittings for leaks. If the knee cylinder is faulty, refer to "Knee Cylinder" on page 4-42.
Hilow cylinder	Check for full travel of the hilow cylinder. Inspect the cylinder for residual fluid. Inspect the hilow pin for wear. If the pin is worn or the cylinder is faulty, refer to"Hilow Cylinder" on page 4-44.
Hydraulic fluid reservoir	Remove the foot end cover. Inspect the fluid level in the reservoir. If more fluid is needed, refer to "Hydraulic Oil (Current Version)" on page 4-20 or "Hydraulic Oil (Early Version)" on page 4-18.
CPR release	With head and knee sections raised to the high position, activate the CPR release with the selector lever. The head and knee sections should lower simultaneously to the flat position. If the manual selector valve is out of adjustment or faulty, refer to "Manual Selector Valve" on page 4-32.

Lockout switches	Test each lockout switch individually for proper function. Test the master power switch for proper function. If necessary, refer to: • "Master Lockout Switch" on page 4-26, or • "Hilow Switch (Nurse Control Panel)" on page 4-50, or • "Lockout Switch (Nurse Control Panel)" on page 4-53.
Central brake and steer	Check the brakes to ensure that the bed will not move when the brake pedal is activated. Inspect the caster brake pads for excessive wear. Check the brake and steer caster for proper steer function. If brake adjustment is necessary or the steer function is faulty, refer to "Caster" on page 4-81.
Caster tires	Inspect the caster tires for cuts, excessive wear, etc. If necessary, refer to "Caster" on page 4-81.
Siderail controls	Check the switches in the siderails for proper operation. If the switches will not function or they operate intermittently, refer to: • "Siderail Nurse Call, Lighting, or Bed Control Switch" on page 4-76, or • "Siderail Entertainment Controls and Component" on page 4-79.
Siderail frame	Check all of the siderails for proper locking of the siderail in each raised position.
Pivot points	Lubricate all upper pivot points and black slide rods on the siderails.
Power cord and plug	Inspect the power cord and plug for cuts, nicks. or breaks. Replace the power cord or plug if indications of damage are visible.
Motor capacitor	Check the motor capacitor to ensure it is not weak or defective. If necessary, refer to "Hydraulic Pump (Motor Driven—Current Version)" on page 4-16, or, "Hydraulic Pump (Motor Driven—Early Version)" on page 4-14.
Utility shelf	Check the utility shelf for proper operation. Verify that the shelf locks in the up position.
Scale	If the bed is equipped with the scale system, use a known test weight to ensure that the scale is functioning properly. If necessary, refer to "Scale Unit (Standard Configuration)" on page 4-58, or, "Scale Unit (VDE Configuration)" on page 4-61.
Head and foot panels	Check the panels for damage and general appearance. Replace if necessary.
Overall appearance	Use touch up paint where necessary. Inspect the labels and replace them as needed. Check the general appearance of the bed.

Communications	Inspect the communication junction box. Inspect the communication cable and the male and female pins in the plug. If necessary, refer to “Terminal and Pin” on page 4-9.
Electrical test	Test the bed and assign an inspection sticker to the bed.

Preventive Maintenance Checklist

Table 6-2. Preventive Maintenance Checklist

	Manufacturer																								Date
																									Contour limit
																									Trendelenburg limits
																									Head cylinders
																									Knee cylinder
																									Hilow cylinder
																									Hydraulic fluid reservoir
	Model number																								CPR release
																									Lockout switches
																									Central brake and steer
																									Caster tires
																									Siderail controls
																									Siderail frame
																									Pivot points
																									Power cord and plug
																									Motor capacitor
	Serial number																								Utility shelf
																									Scale
																									Head and foot panels
																									Overall appearance
																									Communications
																									Electrical test
	Total Cost for This Page																								
																									Labor Time:
																									Repair Cost:
																									Inspected By:
																									Remarks Applicable N=Not Okay O= Replace R=Repair or Adjust A= Clean C= Lubricate L= Legend

Bed Storage

If a bed is stored without the mattress, cover the radiolucent panels with cardboard or something similar to protect the panels. A deep scratch in a panel can affect the quality of an x-ray image.

Chapter 7
Accessories and Kits

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Accessories

Table 7-1. Accessories List

Part Number	Description
P290-48	Cane bumpers
P362	Chart holder
P943C	Comfortline CC mattress
P914C	DynamicAire sleep surface
P914E	DynamicAire sleep surface
P930C1	Foot extender pad
P155-05	Infusion support system
P2218	IV rod, permanent
P2217	IV rod, standard
P276	Oxygen tank holder
P495	Patient phone
P855C-2	Siderail pads
P855C-2H	Siderail pads—head
P294	Transducer holder
P844C-48	Trapeze support bracket
P280A	X-ray cassette holder

7.1 Cane Bumpers

Use of cane bumpers increases the distance between the bed and the wall. Install the cane bumpers into brackets on the base of the bed at the head end.

7.2 Chart Holder

The chart holder is a convenient storage feature for keeping patient charts at the bed with the patient. The chart holder installs on the head or foot panel of the bed.

Installation

1. Attach the hooks over the top of the head or foot panel.
2. Press in the lower portion of the chart holder.

7.3 Comfortline CC Mattress

The Comfortline CC Mattress is a pressure reducing mattress designed to improve patient comfort by reducing interface pressure.

7.4 DynamicAire Sleep Surface

The DynamicAire Sleep Surface reduces the risk of skin breakdown by dissipating the heat from between the sleep surface and the patient. The cover has a zipper on three sides to allow easy access to all internal sleep surface components. Six magnets are attached to the bottom of the cover to help hold bed sheets in place.

Install the DynamicAire Sleep Surface on the bed and connect the four air hose quick-disconnect couplings.

7.5 Foot Extender Pad

The foot extender pad is used under the feet of the patient when the bed is in the extended mode.

NOTE:
The foot extender pad must be installed on the head panel prior to installing the head panel on the mattress stops.

Install the foot extender pad by sliding the head panel through the strap on the bottom of the pad.

7.6 Infusion Support System (ISS)

WARNING:
Take hold of the upper section of the transfer pole before pulling the release knob. If not held, the upper section of the pole will drop quickly and could cause injury.

The ISS is a support system that mounts at either of the four corners of the bed. Primary components of the ISS include a transfer pole and an offset bar. Always ensure the transfer pole is firmly secured to the offset bar before you transfer them with a patient.

Installation

1. Insert the offset bar in a corner of the bed’s upper frame.

2. Firmly tighten the knob, located in the bed corner bumper, by hand to secure the offset bar.

3. Insert the transfer pole in the offset bar.

4. Firmly tighten the knob, located on the offset bar, by hand to secure the transfer pole to the offset bar.

7.7 IV Rod, Permanent

WARNING:
Take hold of the upper section of the IV rod before pulling the release knob. If not held, the upper section of the rod will drop quickly and could cause injury.

An IV rod is permanently attached to the bed between the sleep surface and the head panel. To extend or retract the upper section of the rod, pull the release knob on the rod. With the top section of the IV rod in the lowest position, you can store the rod horizontally across the upper bed frame. A storage clip is provided on the frame.

Installation

1. Install the replacement IV rod in the head end weldment on the left side of the upper frame.

2. Install the roll pin through the IV rod base and the head end weldment.

3. Secure the ground strap of the IV rod to the weldment with a screw.

7.8 IV Rod, Standard

The standard IV rod is a removable, 3/4", telescopic IV rod. It can be installed at any of the four corners of the bed. Clips on the side of the bed base frame are provided for IV rod storage.

WARNING:
Take hold of the upper section of the IV rod before pulling the release knob. If not held, the upper section of the rod will drop quickly and could cause injury.

Install the standard IV rod at any corner of the bed in the mounting holes provided.

7.9 Oxygen Tank Holder

The oxygen tank holder holds an oxygen tank and can be mounted vertically or horizontally on the bed in convenient, out of the way locations.

Vertical Installation

1. Insert the mounting bar of the oxygen tank holder in either of the four IV rod support features at the corners of the bed.
2. Install the oxygen tank in the holder.
3. Secure the tank by tightening the tank thumbscrew finger-tight.

Horizontal Installation

1. Insert the ends of the oxygen tank holder in the support brackets under the head end of the bed. The mounting bar will click in place.
2. Install the oxygen tank in the holder with the regulator facing up.
3. Secure the tank by tightening the tank thumbscrew finger-tight.

7.10 Patient Phone

An optional telephone system that can be mounted in the half length siderails (on either side of the bed) or on a chair positioned next to the bed.

7.11 Siderail Pads

Siderail pads provide padding between the patient and the siderails when siderails are in the intermediate or up positions. Head end pads have cutouts for access to the bed control switches.

Installation

Install the pads over the siderails with the padded side next to the patient.

7.12 Transducer Holder

The transducer holder supports patient monitoring equipment. The transducer holder is easily mounted on the Hill-Rom ISS.

Installation

1. With the ISS mounted on the bed, position the open end of the horizontal bar on the ISS pole. The knob at the closed end of the horizontal bar should be on the bottom side of the bar. Firmly tighten the knob at the open end of the bar.

2. Install the extension rod through the height adjustment rod. Use the setscrew to secure the extension rod.

3. Install the extension rod through the horizontal bar. Firmly tighten the knob on the bottom side of the horizontal bar.

Adjustment

1. Loosen the applicable knob.

2. Adjust the position of the transducer holder.

3. Firmly tighten the knobs to secure the transducer holder.

7.13 Trapeze Support Bracket

The trapeze support bracket mounts at the head end of the bed and facilitates the use of trapeze equipment in the Century CC Bed.

Installation

1. Remove the roller bumpers from the head end of the upper bed frame.

2. Install the frame assembly and two support brackets.

3. Install the roller bumpers on the frame assembly.

7.14 X-Ray Cassette Holder

The cassette holder allows for lower abdominal to upper chest x-rays with the head end of the bed in a flat or upright position. The cassette holder will accept a 14" x 17" (356 mm x 432 mm) film.

The cassette holder installs under the head section of the bed. Place the ends of the cassette holder mounting bar in the support brackets located at the base of the head section. The mounting bar will click into place when correctly installed.

Kits

Hill-Rom offers field upgrade kits for upgrading existing Century CC beds to include additional features.

For more information about upgrade kits or accessories, please call your Hill-Rom Customer Service Administrator or your Technical Sales Manager.